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Message from the Department Head

Dear Friends of UConn Chemistry,

These are exceptional times for UConn and for the Department. Next Generation Connecticut, a $1.5 billion investment in Connecticut’s economic future, aims to expand educational opportunities, research, and innovation in STEM disciplines at UConn over the next decade. This effort will spur major growth in the University’s enrollment, increased faculty hiring, and updated STEM facilities. UConn Technology Park, a $172 million investment by the State, will enable UConn faculty and students to work closely with industry partners to galvanize innovative breakthroughs and commercialization in the region. Flexible-use laboratories will feature $40 million of specialized equipment to support collaborative research efforts. Further financial support comes to UConn from Connecticut Innovations (CI), the leading source of financing and ongoing support for Connecticut’s innovative, growing companies. CI will manage the recently announced $200 million, 10-year Bioscience Innovation Fund. Jeremy Crisp, the newly appointed Executive Vice President and Chief Innovation Officer of CI, recently visited the Department of Chemistry to discuss developing and commercializing its innovative bioscience research. All of this means exciting opportunities for research expansion and tremendous challenges with increased enrollments!

There are now 190 chemistry majors. Over the summer we had to plan for 25 new sections in our various general chemistry offerings because of increased enrollments in the STEM disciplines. Our exceptional laboratory technicians pulled this off in record time! This growth ultimately will create new pressures at every level of our undergraduate offerings. We see this as an opportunity to explore new models of effective instruction. Our research active faculty are also using their creativity to successfully procure funding, allowing us to investigate innovative teaching strategies.

Our graduate student numbers are holding steady at 140. In May, 25 Ph.D. and 11 M.S. degrees were granted with the former number being equal to our record set last year. These students are now moving across the globe into postdoctoral and faculty positions and into employment; some of their stories are highlighted in the newsletter.

To support the new faculty and students, we welcomed a new NMR facility manager, Dr. Vitaliy Gorbatyuk, a new Grants and Contracts Manager, Laura Corrigan, and two new undergraduate laboratory technicians, Ben Anacleto and Noreen Nkosana. To help us with the growth in our service courses, particularly while we build our tenure track faculty, there are three new Visiting Assistant Professors, Clyde Cady, Joe DePasquale, and Jeremiah Scepaniak.

Our faculty continue to excel in the classroom, in their scholarly activities, and in their commitment to outreach, as is evident from this newsletter. We highlight research ranging from quantum dots to understanding the influence over time of shifts in global atmospheric CO₂ concentrations. As you will see, the three Assistant Professors—Jing Zhao, Michael Hren, and Alfredo Angeles-Boza—who have just started their second year are off to a great start. In January, Jie He joins us as our first external hire for our new Green Emulsions Micelles and Surfactants (GEMS) Center. We are currently searching for two more faculty for GEMS.

With a combined 67 years of service, Harry Frank and Bob Michel retired this summer. Retired is, perhaps, not quite accurate. Bob is continuing with his editorial activities, while Harry directs his NSF and DOE funded projects.

On behalf of the Department of Chemistry, I invite you to peruse the contents of this newsletter and to note the accomplishments of our faculty, staff, students, and alumni. We hope that you will also take the time to share your news with us and stop by to visit if you find yourself in the area.

Sincerely yours,

Amy R. Howell, Ph.D.
The University of Connecticut has named Alphachromics as the “Top UConn Start-up Company” at annual award ceremonies attended by top business leaders from around the state and academic leadership from UConn.

Alphachromics was formed in 2010 by UConn Ventures to commercialize the electrochromic innovations developed in the lab of Gregory Sotzing, Professor, organic and polymer chemistry in the Department of Chemistry and the Institute of Materials Science. The technology changes the light transmittance properties of a substrate by the application of voltage and/or current.

The company’s low-cost, color-changing conductive polymers can be applied to products as diverse as energy efficient windows, tunable eyewear (goggles and sunglasses) and high performance switchable fabrics. Alphachromics is currently working with development partners in industries including eyewear and apparel to develop and adapt their technology for use in a range of high-volume consumer, commercial and military applications.

Alphachromics was honored at the University of Connecticut’s second annual Celebration of Innovation, held at Rentschler Field in East Hartford on April 10, 2013. The selection process and award ceremonies were coordinated by UConn’s Office of Economic Development. Mary Holz-Clause, Vice President for Economic Development, presided over the awards.

UConn Ventures, aligned with the University’s Office of Economic Development, creates business start-ups by seeking out university-based research innovations, guiding the development process, soliciting funding, and recruiting management based on technologies invented by UConn students, faculty, and staff. It is a subsidiary of the UConn Foundation. Financial benefits achieved by the resulting start-up companies accrue to the individuals whose research innovation is at the core of the start-up and to UConn.

“UConn Ventures provides the expertise and experience that is essential to successfully commercialize great research. Alphachromics provides a clear example of how effectively they work with faculty to advance great ideas, and their organization will continue to play a pivotal role in moving innovation from the lab to market,” said Holz-Clause.

“We work very closely with faculty from day one to explore and evaluate the possibilities of their research driving the establishment of successful business,” said R. Mark Van Allen, President of UConn Ventures. “We congratulate Alphachromics on being recognized as UConn’s top start-up. And we are energized by the tremendous potential of Alphachromics not only to bring financial return to UConn, but to succeed in the marketplace by making a difference in people’s daily lives.”

“This is a great technology, with a ton of potential,” said Mark Bertolami, CEO of Alphachromics. “We’ve made tremendous progress over the past year in working to commercialize the technology. As an early stage start-up, the access to resources and terrific support that we’ve received from UConn Ventures and the University has been absolutely essential to our success.”

Bertolami added that the company “hopes to establish a performance track-record that rivals the UConn women’s basketball team,” in remarks during the award ceremony, which came the day following UConn winning its eighth women’s basketball national championship.

The company recently secured funding from Connecticut Innovation’s Pre-Seed Fund.

-Adapted from UConn Ventures
New Geochemical Method Highlights Links Between Terrestrial Climate and Atmospheric CO₂

Nearly 34 million years ago, the Earth underwent a transformation from a warm, high-carbon dioxide “greenhouse” state to a lower-CO₂, variable climate similar to the modern “icehouse” world. Massive ice sheets grew across the Antarctic continent, major animal groups shifted, and ocean temperatures decreased by as much as 5 degrees Fahrenheit.

But studies of how this drastic change affected temperatures on land have had mixed results. Some show no appreciable terrestrial climate change; others find cooling of up to 8 degrees and large changes in seasonality.

Now, Hren and his colleagues have used a recently-developed “clumped isotope thermometer” to examine terrestrial fossil shells from this time period. The team collected fossilized snails from the Isle of Wight, Great Britain, and looked for not just the kind and number of carbon and oxygen isotopes present, but how they were bound together.

The abundance of bonds containing heavy isotopes of both oxygen and carbon are temperature-dependent; they can give a reliable picture of the terrestrial climate.

“The unique thing here is that we’re using isotopologues to measure the temperature that these snails experienced and relating that to the climate during this interval of declining CO₂,” Hren says.

What makes their results so important, says Hren, is that it’s further evidence that CO₂ is linked not only to climate by way of the vast oceans and their temperature, but by terrestrial temperatures, too.

“It gives further evidence of the close links between atmospheric CO₂ and temperature, but also shows how heterogeneous this climate change may be on land,” he adds.

Studies have shown that, before this drastic cooling event, Earth’s atmosphere contained 1,000 parts per million (ppm) of CO₂ or more, and by the end of the transition, it was likely lower than 600-700 ppm. Some predictions, notes Hren, suggest that Earth’s current CO₂ concentrations, currently at close to 400 ppm and climbing, could increase to nearly 1,000 ppm in the next 100 years.

If that turns out to be the case, it’s likely that temperature changes on the scale of the Eocene to Oligocene could occur—but in the other direction, toward a much warmer climate that could again reshape living things on Earth.

“We are on a path to fundamentally alter our global climate state,” says Hren. “These data definitely give you pause.”

The other members of the research group are: Nathan Dale Sheldon and Kyger C. Lohmann of the University of Michigan; Stephen T. Grimes and Melanie Bugler of Plymouth University, England; Margaret E. Collinson of Royal Holloway University, London; and Jerry J. Hooker of the Natural History Museum, London.

Adapted from UConn Today
Chemist Alfredo Angeles-Boza Joins UConn Faculty

At the suggestion of his father, who was an economist, Alfredo Angeles-Boza set off for college in his native Peru with designs on becoming an industrial engineer. That was before he took his first college chemistry course. Once introduced to the world of atoms and ions and especially the myriad challenges of working with inorganic matter, he was hooked on science and has never looked back.

Not unlike thousands of graduate students before him, Angeles-Boza’s academic path was initially influenced by the research of others. While completing undergraduate studies at Pontifica Catholic University of Peru, he had read about work being done by a researcher at the Michigan State University using metal complexes as anti-tumor agents in the fight against cancer.

“I was reading a book on anti-cancer compounds,” he said, “and there were only a few [research] groups in the world working with metal complexes as anti-tumor agents. I loved the chemistry the book described and I told myself that I had to work in this [area].”

By the time he was ready to apply to graduate school, that researcher, Professor Kim R. Dunbar, had begun working at Texas A&M, and that is where Angeles-Boza completed his Ph.D.

As a graduate student, Angeles-Boza’s research involved synthesis and characterization of new metal-based compounds with applications in medicinal chemistry. He conducted structure-activity studies to enhance characteristics of these molecules for their application in Photodynamic Therapy. Photodynamic Therapy is a minimally invasive way of treating conditions such as wet age-related macular degeneration, as well as some cancers.

After accepting a position as a post-doc at A&M, he worked in a lab devoted to finding new ways to deliver small molecules and proteins inside cells. Through the use of native chemical and expressed protein ligation, he studied ways to improve the activity of cell-penetrating peptides.

His next stop was in Baltimore, Maryland as a post-doc at Johns Hopkins. At John Hopkins, he worked in a lab where he studied mechanisms of reactions of enzymes and inorganic catalysts, as well as the use of 18O isotope effects and density functional theory (DFT) methods to explain water oxidation reactions.

Angeles-Boza was well established at Hopkins when he became aware of UConn’s hiring initiative. “One of my requirements when I looked at jobs was that there would already be a thriving Ph.D. program in place. I was excited to learn that UConn was hiring so many new faculty. The [chemistry] department hired three of us this summer, and has plans to hire more. That was very encouraging to me, because I want to be part of something that is dynamic and growing.”

Now established in the Department of Chemistry in the College of Liberal Arts and Sciences, where his teaching and research efforts are under way, his focus is on the use of synthetic inorganic chemistry as a tool to design and construct new molecules for targeted applications. His research is centered on two key areas. The first, which has many applications in the fight for a clean environment, is using molecular chemistry to convert carbon dioxide into higher-energy products.

“Carbon dioxide is a very unreactive molecule,” says Angeles-Boza, “that’s why when we burn fossil fuels the result is CO2 and it doesn’t convert to anything else. I have the idea that we can take CO2 and turn it into something we can use, such as methanol. In theory, it is possible to do this using already available solar energy.

“The reason for converting CO2 to methanol,” he adds, “is to create something that can be converted later into other products or as an energy source itself.”

The other aspect of Angeles-Boza’s research reflects his initial interest in the use of metal complexes to fight tumors. “We now know that an imbalance of metal ions—either too many or too few—can cause disease. I’m trying to develop special molecules that can remove metal ions from specific places in the body or, on the other hand, deliver them to organs or cells where they are needed.”

He is currently focusing on angiogenesis. “We normally think that’s a good thing,” he says, “because new blood vessels can form from existing vessels as part of a healing process. But one of the problems is that angiogenesis is also an important function in the growth of tumors. So what I want to do is create molecules that can not only stop growth, but actually turn the metal compounds back on themselves to destroy the original tumor cells.”

Angeles-Boza’s research initiatives hold promise for the health and well-being of future generations. He says it is a long process, but one that is worth it to him as he spends time introducing a new generation of students to some of the things that captured his attention at the beginning of his own academic career.

“Adapted from UConn Today
Jing Zhao Uncovers Science of Nanoparticles

Nanoscience and nanotechnology has been a rapidly growing research field in the past few decades. New phenomenon at the small size scale (1 nm = 10^-9 m) that are significantly different from the bulk have been observed in many materials. Nevertheless, nanomaterials have been used in ancient times, long before the word “nano” appeared. For example, gold nanoparticles were used to produce the red color of gold-ruby glass, as in the famous Lycurgus Cup in the British Museum. The cup appears green in daylight because the gold nanoparticles reflect the green light. However, if illuminated from inside, the cup appears red because the gold nanoparticles absorb the green light while allowing the red light to transmit.

Fascinated by the color of the nanomaterials, Jing Zhao’s research group has devoted a lot of effort to understanding the fundamental properties of single nanoparticles and the new optical phenomenon caused by the interaction between nanoparticles. Two types of nanomaterials the Zhao Group focuses on are metal nanoparticles and semiconductor nanocrystals.

Metal nanoparticles exhibit unique optical properties compared to the bulk materials. For example, bulk gold has a yellow color, while gold nanoparticles have a range of colors, depending on their size and shape. The star-like image taken using a smartphone through the eyepiece of a microscope shows the scattering of single gold nanoparticles. Different colors are observed because of the polydispersity in the nanoparticle geometry. It is critical that we understand the relationship between the structural and optical properties of individual nanoparticles. This can be achieved using correlated optical and electron microscopy.

Quantum dots are tiny semiconductor nanocrystals that glow in a range of colors, determined by the sizes of the particles, when excited with light or an electric field. They have potential for many applications, such as in biological imaging, light emitting devices, and photo detectors. It is highly desired that the quantum dots possess the following properties: uniform size and shape, high emission quantum yield, narrow emission spectrum, low tendency to blink on and off at the single quantum dot level, and high photostability. All such properties have not been achieved in quantum dot materials until recently. These new type of quantum dots combined all the desired properties (Nature Materials, 2013, 11, 445). A separate study revealed that despite the extremely uniform size and shape of these quantum dots, there is still big distribution in the biexciton emission efficiency of them. The study provides insights into the nanocrystal blinking mechanism (Nano Letters, 2012, 12, 4477).

Optical nanomaterials allow us to manipulate light beyond the diffraction limit. When combining multiple types of materials in one structure, the interaction between them gives rise to new optical properties. For example, in a complex structure composed of metal nanoparticles and quantum dots, the emission of the quantum dots may be enhanced by the presence of the metal nanoparticles, while the absorption and scattering of the metal nanoparticles may be altered as well. The Zhao Group is interested in the synergetic interactions in the complex nanomaterials, and would like to investigate how scientists can control the interactions by the structures of the nanomaterials. The research will lead to findings of unconventional phenomenon and facilitate the design of new optical nanomaterials.

The Lycurgus Cup. Left: the cup is illuminated under daylight; Right: the cup is illuminated from the inside. Credit: Nature, 2000, 407, 691.

The International Language of Science

My experience as a Fulbright fellow in Barcelona this past year transformed me, both professionally and personally. I returned to Connecticut not only with a broader perspective on my research but with a profound sense of place and the amazing impact of personal relationships.

Perhaps most importantly, I returned with a sense of what I had always known but had never experienced quite like this: science is an international language, spoken around the world by people with a thirst for new knowledge.

When I first arrived in Barcelona, my life was a maelstrom of impressions and emotions: new sights, new smells, late lunch and later dinner, hearing and speaking the Catalan language, the kindness of the locals, and somehow within it all, a sense of solitude. I had chosen to work at the Chemistry Institute of Sarria (IQS) with Professor Antoni Planas, known to everyone as Toni. My host and his laboratory were the one constant during my transition.

Within a couple of weeks, I had learned the basics of day-to-day living, and I began to feel like I was a local. Science is inherently international; the lab was a logical place to connect with something that was familiar to me.

Getting Proteins to Work for Us

Toni is world-famous for developing glycosynthases, which are engineered proteins that have their origins in sugar metabolism. The term glycosynthase was coined to indicate that the enzymes could use sugars (“glyco”) to synthesize (“synthase”) new polymers.

Glycosynthases caught my eye because my research group at UConn synthesizes artificial sugars and characterizes how proteins bind to them. Our expanded sugars compete with natural sugars for protein binding sites and could have implications for preventing bacterial infections, among other applications. We wanted to know whether glycosynthases could utilize our expanded sugars in their reactions.

With help from Hugo Aragunde-Pazos, a graduate student at IQS, I prepared the enzymes and looked at their activity using compounds from my lab. Aside from doing the science itself, working in the laboratory with Spanish students was a curriculum in language, both Spanish and Catalan. Although I’ve been exposed to the Spanish language—my wife is Colombian and Spanish—I spent significant energy on simple communication. My labmates were remarkably helpful and patient with my slow language skills.

Eventually, the language barrier broke down, and I was able to easily communicate. The experience made a strong impression on me. Now I better empathize with the challenges that face international researchers in the U.S.

The results of the research showed that our sugars are weak substrates for glycosynthases; this is actually encouraging because our sugars shouldn’t be degraded by natural enzymes if they are used as drugs. It also allows us to develop new enzymes, via mutation and screening, that will only accept our sugars.

The Heart of the Science

In the spirit of the Fulbright program, which encourages open exchanges of ideas with people from different parts of the world, I interviewed a few scientists in Barcelona whose research interests are similar to mine. I spoke with my friend, Xavi Salvatella; Ernest Giralt, who was a collaborator with my Ph.D. advisor; and Lluís Ribas, a scientist and entrepreneur working on the development of new antibiotics. All are researchers at Barcelona’s Institute for Research in Biomedicine.

In the interviews, I asked about their research programs, how they ended up at the IRB, and what it meant for them to be doing research in Barcelona. Each of them expressed a strong connection to Catalunya—their region of Spain—and to their families and friends who live there.

It struck me that these things—identification with “home” and close personal relationships—make any group unique, but it is also common to all groups. I realized that these scientists have made choices that balance their scientific passion with their cultural identification and feelings about what is “home.” The realization has kindled a desire in me to remember the importance of people and place in my daily life.

You simply can’t go to Catalunya without taking a few excursions to take in cultural sights. A highlight was a day trip to the nearby beach town of Sitges on Corpus Christi, a holiday, to see the “carpets of flowers,” kind of like a stationary Rose Parade.

A series of 10-foot-tall puppets, known as “gigantes,” danced through the streets while simultaneously destroying the carpets. My companions couldn’t explain why the gigantes had to destroy the flower creations, but it seemed symbolic to me.

It’s also difficult to talk about Spain without mentioning food. Paella was both the food and the entertainment at a party in honor of Toni, who had just received the Fischer Prize at the 2013 European Carbohydrate Symposium. After we had consumed mountains of paella, there was a viewing of a video, “Planas Style,” a Catalan rendition of Psy’s “Gangnam Style.” It was filmed in honor of Toni, but also to parody him. I suppose this is evidence that some cultural phenomena, especially pop culture, are truly international.

Now I’ve returned to the Connecticut I know and love, but I often find myself reminiscing about the cultural immersion I experienced in a land so different from mine. Beyond the scientific collaboration that I sought on my trip, I now have a deeper understanding of how Catalans see the world and themselves. I am attached to both the specifics of this perspective—in terms of Catalunya’s uniqueness within Spain—and also the broader sense of place and relationships.

As I watch the autumn leaves change and fall to the ground and notice the red barns rising over Horsebarn Hill, I can only hope that I revealed a Nutmegger’s perspective of the world to my new friends in Barcelona in the same way that they shared their culture with me.

“Science is an international language, spoken around the world by people with a thirst for new knowledge.”

-Mark Peczuh, via UConn Today
**Cover Stories**


Professor Michael Smith has completed *March’s Advanced Organic Chemistry: Reactions, Mechanisms, and Structure, 7th Edition*. The new, revised and updated 7th edition of *March’s Advanced Organic Chemistry* clearly explains the theories and examples of organic chemistry, providing one of the most comprehensive resources about organic chemistry available.

**Journal of the American Chemical Society**


Controlled assembly of poly(L-glutamic acid)-grafted gold nanoparticles in solution creates structurally defined supramolecular polymers. The study shows that the supramolecular polymerization process occurs in two distinct stages, with a slow nucleation step followed by a faster chain propagation step.

**Chemistry: A European Journal**


The synthesis of the long sought-after pyrazole-based expanded porphyrin and its homobimetallic nickel(II) and copper(II) complexes is described. The structural parameters of these hexaphyrin analogues, named the Siamese-twin porphyrins, proved them to be non-aromatic, but fully conjugated. In the complexes, each metal ion is coordinated in a square-planar fashion by a dianionic, porphyrin-like \( \{N_4\} \) binding pocket. The persistent helical twist of the compounds permitted resolution of their enantiomeric helimers.

**Organic & Biomolecular Chemistry**


Reaction of known meso-tetraarylporpholactone free bases, made from the corresponding porphyrins, with hydrazine produces three products: It converts the lactone functional group into an \( N \)-aminolactam moiety. It also reduces regioselectively the \( \beta,\beta' \)-double bond of the pyrrolic moiety opposite to the imidazolone in both the starting material and the \( N \)-aminoporpholactam. All these transformations show the flexibility of our ‘porphyrin breaking and mending’ strategy toward the synthesis of novel porphyrin and chlorin analogues incorporating non-pyrrolic heterocycles that carry functionalities at their periphery.

**Alumnus Establishes Bobbitt-Chou Fund**

The late Thomas Tsu-teh Chou generously bequeathed $270,000 to the Department of Chemistry and to the College of Liberal Arts and Sciences. Mr. Chou’s contribution supports the Tso Lin Scholarship Fund for Advanced Studies in International Affairs—funding scholarships and study abroad opportunities through CLAS—and the newly-established Bobbitt-Chou Fund for Graduate Chemistry Students.

Mr. Chou established the Bobbitt-Chou Fund for Graduate Students in honor of Professor Emeritus James M. Bobbitt and his wife, Jane Ann Bobbitt. The purpose of the fund is to provide fellowships for Graduate Chemistry students that demonstrate academic achievement and financial need.

Mr. Thomas Tsu-teh Chou had received his master’s degree from the University of Connecticut in 1959 under the advisement of Dr. James Bobbitt. Dr. Bobbitt was instrumental in assisting Mr. Chou with the process of becoming a U.S. citizen. After graduating from UConn, Mr. Chou worked for Pfizer. In 2011, Mr. Chou passed away at the age of 86.
New Faculty

CLYDE CADY, Visiting Assistant Professor
Dr. Clyde Cady is originally from Minnesota. He has a B.S. from the University of Minnesota and a Ph.D. from Yale University. Dr. Cady has done post-docs at Uppsala University and Rutgers University. His research interests include green oxidation by small biomimetic molecules and metal oxides. He is teaching general chemistry classes and will teach an entirely revamped advanced inorganic chemistry laboratory in the coming spring.

JOSEPH DEPASQUALE, Visiting Assistant Professor
Dr. Joseph DePasquale is originally from the small town of Beach Lake, PA, which is located in the Pocono Mountains of northeastern Pennsylvania. In 2007, he obtained a B.S. degree in Chemistry from Shippensburg University. After the completion of his undergraduate degree, he worked for a year as a laboratory technician at General Electric Global Research in Niskayuna, NY. In 2008, he began his doctoral studies in Inorganic Chemistry at Drexel University under the advisement of Professor Elizabeth Papish. He completed his Ph.D. in 2013. His doctoral research was focused on the synthesis and study of organometallic catalysts for hydrogen transfer reactions and water oxidation. At UConn, he teaches general chemistry courses.

JIE HE, Assistant Professor
Dr. Jie He was born and raised in Sichuan, China. He received his bachelor's and master's degrees both in Polymer Material Science and Engineering at Sichuan University. He then moved to Université de Sherbrooke (Canada) where he earned his Ph.D. in Chemistry. Dr. He’s Ph.D. research was focused on photoresponsive polymers. He had postdoctoral training at the University of Maryland on the self-assembly of plasmonic materials. Dr. He will start his new research group in the Department of Chemistry at the University of Connecticut in Jan 2014. Research will be focused on the synthesis, self-assembly, and applications of polymers/inorganic hybrid materials. The main research topics in the He Laboratory include, i) the programable synthesis and assemblies of metamaterials by designing the macromolecular architectures; ii) the development of responsive hybrid materials for applications in actuators, self-healing and nano/micro motors; and iii) the design and synthesis of new colloidal molecules and the investigation of their self-assemblies at all scales.

MARY SOL KEESEY, Instructor in Residence (Hartford Campus)
Mary Sol Keesey is originally from Davao City, Philippines which is located at the southern part of the country. She obtained her B.S. degree in Chemistry from Ateneo de Davao University. After graduation, she worked at Ateneo de Davao University as a chemistry laboratory assistant. Then, she traveled to Manila to pursue her graduate studies. Mary Sol first attended Ateneo de Manila University and completed her graduate degree from De La Salle University. After graduation, she was hired as a researcher and analytical chemist at the Ateneo de Davao University’s Chemistry Analytical and Research Laboratory. She also was a chemistry instructor. After getting married, she came to the U.S. with her husband, had two sons, and became a full-time homemaker for almost 21 years. Mary Sol worked as a substitute teacher for five years, during which she taught grades ranging from pre-K to 12th grade in the neighboring towns of Andover, Colchester, Columbia, Marlborough, and at Windham Technical High School. For the past 3 summers, she worked as the arts and crafts director at Camp Asto Wamah, a church camp located at Columbia, CT. She enjoys teaching origami to young children and the young at heart.

YASHAN ZHANG, Assistant Professor in Residence (Hartford Campus)
Dr. Yashan Zhang received her bachelor’s degree in Chemistry at the Dalian University of Technology and received her doctorate degree at the University of Connecticut under the advisement of Dr. Steven Suib. Yashan is now teaching general chemistry at UConn’s Hartford campus. Dr. Zhang is excited to pass along the knowledge, skills, and experiences she gained as a scientist to the new generation.
New Staff

**Ben Anacleto, Undergraduate Laboratory Technician**
Ben Anacleto studied chemistry and physics at Suffolk University. He enjoys rock climbing, cycling, and backpacking, and has seen the majority of the U.S. by traveling on foot.

**Aneesa Bey, Temporary University Specialist**
Aneesa Bey is from North Stonington, CT. She obtained her Bachelor’s in Business Management from Central Connecticut State University. She is a Certified Research Administrator and now works as a Temporary University Specialist.

**Laura Corrigan, Grants & Contracts Specialist**
Laura Corrigan is originally from North Stonington, CT. She graduated from Wesleyan University with a B.A. in economics and a minor in business. She started working for the Chemistry Department in August 2011 as a Student Administrative Assistant and now works as a Temporary University Specialist.

**Vitaliy Gorbatyuk, NMR Facility Manager**
Originally from Odessa, Ukraine, Dr. Vitaliy Gorbatyuk received his M.S. in Physics and Ph.D. in Bioorganic Chemistry. He then received postdoctoral training in Protein NMR Spectroscopy at the Institute of Biomedical Sciences in Taiwan and later in the Department of Molecular and Structural Biology at the University of Connecticut Health Center where he worked in the field of structural biology.

**Noreen Nkosana, Undergraduate Laboratory Technician**
Noreen Nkosana is originally from Zimbabwe. She graduated from Wesleyan University with a B.A. in Chemistry in 2011 and a M.A. in Chemistry in 2013.

Faculty Accolades

**William Bailey, Professor of Chemistry**
Dr. Bailey is the recipient of the American Association of University Professors Excellence Award for Teaching Mentorship. Professor Bailey was also selected Faculty of the Year by the student honor society, Alpha Lambda Delta.

**Nicholas Leadbeater, Associate Professor of Chemistry**
Dr. Leadbeater was an invited speaker at TEDxUConn, UConn’s independently organized TED event. There, speakers shared great ideas that are bound to change the future. Professor Leadbeater discussed “21st century alchemy—making chemicals out of biofuels” and the hurdles, opportunities, and breakthroughs being made in this exciting new research. Visit www.tedxuconn.com/2013/speakers to listen to Dr. Leadbeater and other TEDxUConn speakers.

**Steven Suib, Professor of Chemistry**
Effective July 1, 2013, Professor Steven Suib assumed his new position as the Director of the Institute of Materials Science (IMS). Dr. Suib has also been elected Solid State Subdivision Chair of the ACS Division of Inorganic Chemistry.

Retirements

**Harry Frank, Professor Emeritus**
As of June 1, 2013 and after 33 years at UConn, Professor Harry A. Frank, Board of Trustees Distinguished Professor of Chemistry, retired from teaching and administrative work. However, because he still has funding for his research from the NSF and DOE, he will continue—for the foreseeable future—to direct his research program and to work with undergraduate and graduate students and other research staff in his lab. His research is aimed primarily at understanding the molecular factors that control energy and electron transfer in photosynthetic organisms and the mechanism of biological coloration in nature.

**Robert Michel, Professor Emeritus**
After 34 years of service at the University of Connecticut, Professor Robert Michel has retired. Since joining the UConn Chemistry faculty in 1979, Dr. Michel’s research has focused upon speciation of organometallic compounds, such as metalloproteins in biological samples, by use of chromatography to separate the compounds followed by detection of the metals with techniques such as laser excited atomic fluorescence in a flame or graphite furnace, or inductively coupled plasma mass spectrometry (ICP-MS). Dr. Michel is the former President of the Society for Applied Spectroscopy and a winner of the Benedetti Pichler Award and an NIH Career Development Award. Most recently, Dr. Michel served as the Committee Chair of the CLAS Committee on Curricula and Courses. He continues to serve as the Editor in Chief of Spectroscopy Letters.

DEPARTMENT News
Jennifer Bento is a graduate student in the Polymer Program at UConn in the research group of Chemistry Professor Douglas Adamson. Below, Jen describes the implications on her career path that resulted from her participation in the UConn Chemistry Research Experience for Undergraduates (REU) program. She connects this experience to choosing UConn for graduate school, and her subsequent success in garnering a prestigious NSF Graduate Research Fellowship.

I received my undergraduate education at Simmons College in Boston where I earned a B.S. in Chemistry and Physics in 2011. During my undergraduate career, I was a teacher’s assistant, a study group leader and an ambassador through Beyond Benign in a Green Chemistry Fellowship program that performed outreach at local Boston public schools. As a Beyond Benign fellow, I was able to work with undergraduates at my institution and meet fellow scientists at local colleges and/or universities in the Boston area. Together we performed hands-on activities with students in grades K-12. I hope that our efforts motivated the students to continue their education in STEM fields. I also helped students at Simmons learn organic chemistry in my role as a TA/study group leader. These fulfilling experiences with students have inspired me to pursue a career as a college professor. My research advisor at Simmons, Dr. Richard Gurney, encouraged me to apply to an REU program sponsored by the NSF to gain further research experience at a PhD-granting institution and to get a sense of what being a graduate student would feel like. I applied and was accepted to the UConn Chemistry REU the summer before my senior year of college. UConn was able to offer exciting research with a successful REU student track record.

Throughout that summer at UConn, I worked in Professor Doug Adamson’s lab; Chetan Hire, a second-year graduate student in the Polymer Program, was my mentor. My REU project used a bio-mimetic polymer, poly (hydroxylated butadiene-b-2-vinylpyridine), as a template for the condensation of titanium iso-proxopoxide to form nanostructured titania. Our choice of polymer was inspired by the naturally occurring enzyme, Silicatein α. This enzyme, which catalyzes biosilicification, was isolated from the marine sponge 

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\text{Tethya aurantia}
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Nearly all hydrolysis of tetraethoxysilane (TEOS), leading to silica formation, is done at low pH. Our mimetic block copolymer structure was based on the two amino acid residues shown to be key for hydrolysis of TEOS under ambient temperature and near-neutral pH by Silicatein α. Our mimic successfully catalyzed and templated the structure of condensed titania with a future application in making a more efficient alternative for a dye-sensitized solar cell. At the end of the program, I communicated my research results in an oral presentation and at a poster session. In addition, I presented a poster at the 24th American Chemical Society (ACS) Conference in Anaheim, California in March of 2011. In February of 2013, we published a paper titled, “Directed formation of silica by a non-peptide block copolymer enzyme mimic” in the Journal of Materials Chemistry B that incorporated some of the work I had done during my time as an REU participant. To have witnessed the work mature from my initial experiments into a full paper was absolutely fascinating and gratifying.

During the REU program, I learned new laboratory techniques and used instruments such as a vacuum line, Thermogravimetric analysis (TGA), Field Emission Scanning Electron Microscopy (FESEM) and Atomic Force Microscopy (AFM). I was able to practice communicating my research during weekly group meetings in Dr. Adamson’s group, a poster and oral presentation at the end of the REU program and at a national scientific meeting. I looked to my labmates as role models and yearned for similar opportunities. As I finished my REU experience, the laboratory techniques I had acquired as well as the bond I had formed with my fellow researchers and professors confirmed my decision to attend graduate school, with UConn being very high on my list.

Indeed, I got accepted and in the fall of 2011 I enrolled in the Polymer Program at UConn to pursue a PhD. I joined the Adamson laboratory and have been working on the synthesis and characterization of polyamide membranes with unusual geometries for desalination applications. The scarcity of clean water is a global issue, and desalination is a promising approach as a partial answer to this shortage. These membranes are hypothesized to have advantages over current thin-film composite (TFC) membranes. I am currently a third-year graduate student and have passed my written and oral exams to become a PhD candidate.

During my first year in the Polymer Program, Professor Adamson encouraged me to apply for graduate fellowships. He said it would provide experience in writing proposals. A funded proposal would give me an enormous freedom to pursue my own research. Among others, I applied to the NSF Graduate Research Fellowship Program (GRFP), the country’s premier graduate fellowship program. Out of about 13,000 applications, 2,000 awards were selected. The NSF application included a personal statement, a previous research essay and my PhD research proposal. My undergraduate and graduate school transcripts were also reviewed. After applying in November of 2012, I was notified in April of 2013 that I was awarded an NSF research fellowship that will provide funding for three years of my graduate work. Receiving this fellowship is personally very rewarding. The many years of preparation, the dedication to research, the multiple outreach activities, the definition of a realistic and important research goal: it all came together. I am truly honored.

I believe my undergraduate training at Simmons as well as my REU experience at UConn have led me down this demanding but rewarding path of higher education in Polymer Science and Engineering. After finishing my graduate studies, I plan to continue my career as a post-doctoral fellow and eventually become a faculty member with my own research lab. I will create programs and clubs within my department to get students involved in research and outreach.

~Jennifer Bento, via UConn Chemistry REU Program
UConn Hosts High School Science Olympiad

Approximately 500 students from 21 high schools across the state traveled to the Storrs campus to participate in the High School Science Olympiad. Students competed for a chance at prizes, scholarships, and professional development opportunities in the annual Connecticut Science Olympiad.

The series of science challenges, organized like an Olympic track meet, was sponsored by the College of Liberal Arts and Sciences and led by science professors from UConn, Yale University, and Connecticut science and engineering businesses.

“We’re proud to support our state’s talented young scientists as they put their problem-solving skills to the test,” said Dean Jeremy Teitelbaum of CLAS, who attended a demonstration by the UConn Chemistry Club and gave remarks at the closing awards ceremony.

Teams of up to 15 members from high schools around Connecticut competed in individual events, and the total score for all team members determined the team’s final score. Throughout the day, students moved from laboratories in the Chemistry Building to classrooms in Oak Hall and the School of Business, competing in events like forensics, protein modeling, astronomy, remote sensing, detecting diseases, forestry, thermodynamics, and technical problem-solving.

United Technologies scientist Treese Campbell, a UConn alumna who earned her Ph.D. in the lab of chemistry professor Steven Suib, oversaw the Chemistry Lab event.

“It’s so important that students take what they learn in a science classroom and apply it to something outside the classroom,” she said.

The students were also curious about her experiences as a chemist. “I’ve talked with many students today and they’re curious about what I do,” Campbell said. Although they still have many years to decide on their careers, she said, it’s great to show them many different types of science in all the different events.

“The Science Olympiad is a great example of the ways UConn is developing the pipeline of Connecticut students prepared to go to college and study STEM disciplines,” said UConn President Susan Herbst. “These events give high-schoolers an opportunity to see what science is all about at the university level.”

Students Bring the Magic of Science to Middle Schools

Funded by a grant from the Camille & Henry Dreyfus Foundation, the Science Wizards were recruited largely from the UConn Louis Stokes Alliance for Minority Participation (LSAMP), an organization that supports minority students in the STEM fields (science, technology, engineering, and math).

According to Joy Erickson, faculty advisor for the group, the Wizards visited 1,500 students in 12 schools in East Hartford, Ellington, Enfield, Hartford, Manchester, Mansfield, and Windham in an effort to expose them to the fun and relevance of science.

As part of the classroom demonstrations, the UConn students showed the younger students how substances can be combined to form common polymers such as nylon and polyurethane foam insulation. Polymers are compounds made up of repeated linked units.

They first followed standard recipes provided by the Wizards, testing each putty they created by bouncing it, stretching it, breaking it, and flattening it to see how closely it resembled Silly Putty. The students then used what they learned to come up with their own recipes.

The winning team from each school won a trip to UConn in early June to tour the polymer labs of Professor Douglas Adamson. There they saw current research projects, such as the development of a polymer fabric that conducts electricity. A T-shirt made of the fabric will be able to heat or cool its wearer.

“We enjoy watching these young students have fun with chemistry,” Erickson said. “We hope that some of them will become UConn Science Wizards themselves one day.”

For three weeks during May and June, a group of UConn graduate and undergraduate science and education majors have been engaged in something magical. They have been getting middle school students absorbed in chemistry.

Known as the UConn Science Wizards, the college students gave hands-on polymer chemistry demonstrations at inner-city and rural middle schools around Connecticut. They took a playful approach to teaching science, using a polymer the middle-schoolers could relate to: Silly Putty.

“I love the program!” said Michelle Goodwin, science teacher at East Hartford Middle School. “It really gets the students excited about science.”

“A passionate and dedicated group, the Wizards are providing a great service to the state’s younger students.”

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Homer Genuino, a recent UConn Ph.D. graduate advised by Professor Steven Suib, spent a week this summer in Germany, attending the 63rd Lindau Nobel Laureate Meeting (Chemistry). The annual Lindau meetings were established in 1951 as an opportunity for an inter-generational dialogue between scientists. Genuino was one of about 600 young researchers from around the world selected to listen to, ask questions of, and engage in discussion with 34 Nobel Laureates, and to network with each other. In this blog, he offers a glimpse inside this prestigious event.

People joke that the earth tilted from June 30 to July 5, 2013, as the world’s brain power had concentrated again in one place—a small, lovely island in Germany called Lindau—where 34 Nobel Laureates and approximately 600 of the brightest young researchers from 78 different countries congregated for the 63rd Lindau Nobel Laureate Meeting. As one of the participants this year, I was very fortunate to witness this phenomenon, at least figuratively.

The 2013 meeting was dedicated to the Nobel Prize discipline of Chemistry, the subject closest to my heart. Three main themes emerged: (1) Green Chemistry, (2) Chemical Energy Storage and Conversion, and (3) Biochemical Processes and Structures. I have always believed that learning chemistry is the key to opening doors for work in multiple areas of scientific research. With no regrets, science has been the right choice for me.

I asked myself, what are the chances of a young researcher like me bumping into so many Nobel Laureates in his/her field under one roof in a lifetime? It is therefore an absolute privilege to be selected to participate in this wonderful event. Special thanks to the organizers and supporters of the Lindau Foundation for launching the Open Application this year. Some travel grant funds and a participation fellowship (c/o AKB Stiftung) were awarded to me without asking anything in return.

The meeting provoked me to think about many ideas in science and society on a broader scale. Personally, it made me reflect again on my motivations in science: the inexplicable but satisfying feeling when I discover something new and significant, or prove that my hypotheses are correct; the rewards I gain from understanding how and why things work; the lessons I learn from failed experiments; the boost of confidence whenever I effectively share my ideas and knowledge with others and when I influence and inspire young minds; the support of the people and the community with shared interests and willingness to work together to further a common scientific goal; and the fact that science, indeed, can make our life better—all motivate me.

The blockbuster question during the meeting was not “What’s your name?” but “Where are you from?” Putting the institution’s name on the ID instead of the country of origin was not a surprise. The organizers obviously wanted us to focus on networking more than on one’s nationality, and what better way to do that than to introduce ourselves first by our affiliations. This proved to be very effective. I was able to know the personal scientific journeys of most of the participants, and I cannot be more proud of my Department and the University, which supported me throughout my scientific career.

-Homer Genuino, via UConn Today
The UConn Chemistry Club hosted Dr. Henry C. Lee, one of the world’s renowned forensic scientists, to give a special lecture on forensics to the UConn community.

Lee has worked on many famous cases, such as the O. J. Simpson trial, the Casey Anthony trial, the Elizabeth Smart case, the Laci Peterson case, and September 11 evidence. He founded and teaches the forensic science program at the University of New Haven and has his own television show, True Evidence on Tru TV.

Lee presented an extensive slide show filled with pictures explaining how he goes about working with evidence as well as gruesome pictures of crime scenes. Lee’s presentation, “Justice Through Sciences: Utilization of Chemical Evidence in Forensic Investigation,” showcased his humor through the jokes and puns that accompanied retellings of his experiences at crime scenes. He poke fun at popular crime series CSI, and explained that their portrayal of forensics is over-the-top compared to real life, where it can take years to make a breakthrough with evidence.

Before he decided to pursue a career in forensics, Lee wanted to become a basketball player but realized that he was too short. Eventually, he found his calling in the forensics field and says that the chemistry behind forensics is one of the most important parts of it. Lee showed how murder cases could be solved by details such as DNA or soil samples found on the victim.

Lee has helped about 46 countries to investigate different types of crime and has handled over 8,000 cases. He talked about his personal experiences on the field and what he has taken away from his work. While working on the JFK case, he explained the importance of how to properly handle evidence without contaminating it. When investigators were originally handling the case back in the 60s, they washed the bullet in water, thereby erasing any hopes of discovering DNA. Lee also explained the way he used a three dimensional model in order to figure out the angles that the bullets entered JFK’s body.

During the lecture, Lee asked different questions to the audience, rewarding those who answered correctly with mini CSI badges bearing Lee’s name. Lee also said that just by looking at a fire he can tell almost instantly whether it is a suspicious fire or not, and after some investigation, can determine the place of origin of the fire as well. In his presentation, he talked extensively on the Elizabeth Smart case and his process looking at extreme details in order to find Smart.

“I’m interested in forensics and I thought [the lecture] was great,” said Matthew Gofstein, 8th semester chemistry major. “I thought it was very interesting, and he gave a lot of insight in the field and what he does,” said Elizabeth Kaesmann, 4th semester chemistry major. “He was very funny and entertaining but informative.”

After the lecture students swarmed Lee in order to ask him questions, take pictures and get his autograph. He left students by again emphasizing the importance of chemistry.

-Adapted from The Daily Campus
**STUDENT News**

In April, the research group of Professor Harry A. Frank attended the Eastern Regional Photosynthesis Conference at the Woods Hole Oceanographic Institute in Woods Hole, Massachusetts. Nikki Magdaong won the prize for the best poster by a graduate student for her presentation entitled, “The Effect of Protein Aggregation on the Spectroscopic Properties and Excited State Kinetics of the LHCII Pigment-Protein Complex from Green Plants.” In the picture, the award is being presented by Dr. Valter Zazubovich, co-chair of the conference.

**STUDENT Awarded New Waterbury Scholarship**

UConn Waterbury student, Nathan Daigle, is the first recipient of a new chemistry scholarship established in memory of the late Wen (Wendell) Hoang. Established by his brother, Nam (Anthony) Hoang, this scholarship recognizes an exceptional student in the Organic Chemistry course. Nathan, who has demonstrated high achievement in both General Chemistry and Organic Chemistry, boasts a 3.94 GPA and plans to become a dentist.

**Nikki Magdaong Wins Best Poster Prize**

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**Students Win “Best Green Idea” Award**

Ph.D. students Ajith Pattammattel and Marc Novak of the Kumar Research Group have been awarded the distinction of “Best Green Idea” in a competition hosted by the UConn Center for Entrepreneurship & Innovation: “The Kumar Group is currently working on protein binding to Graphene Oxide surfaces. Graphene is a one atom thick carbon sheet which can contain an amazingly high amount of biomolecules and cells due to high surface area. So our idea is to use these nanosheets in toothpaste to remove biofilms forming around our teeth. Currently in toothpastes, they use surfactants and heavy metal salts to do this job. So if we can substitute these toxic materials with carbon based nanosheets, it will be healthier and more eco-friendly.”
UNDERGRADUATE AWARDS

American Chemical Society Award
Gina Guerrera

American Institute of Chemists Award
Alexandra Longacre

ACS Division of Analytical Chemistry Award
Casey Camire

ACS Division of Inorganic Chemistry Award
Christine Scanlon

ACS Division of Organic Chemistry Award
Tim Monos

Catherine DeStefano Rossi Memorial Scholarship
Plukshi Bhatt

CRC Press Chemistry Achievement Award
Omar Allam
Hannah Ragonese

Dr. Victor Rizza Scholarship Fund
Faith Crittenden
Johnna D’Ambrusso
Anton Gudz
Thomas Johnson

Graduating Scholars
Eric Commendatore
Gina Guerrera

Hach Chemistry Teacher Scholarships
Aaron Elman
Jenna Nelson

Roland Ward Thesis Award
Nyle Blanck
Timothy Monos

William R. Granquist, Jr. Memorial Scholarship
Daniel Crocker
Anne Yoon

GRADUATE AWARDS

Connecticut Chemistry Research Award
Inoka Deshapriya, Nikki Magdaong & Altug Poyraz

Excellence in Service Award
Jennifer Satterwhite

Masterton Teaching Awards
Snehasis Bhakta, Christopher Dietz, Julie Jenkins, Innus Mohammad & Yuan Ren

Outstanding Service and Research Award
Dhanuka Wasalathamthri

Waring Award
Mark Daben Libardo

INTERNSHIPS

Jennifer Satterwhite, a current Ph.D. student in the Rusling Research Group partook in a two-month research internship at the University of Padova, Italy in Professor Flavio Maran’s laboratory.

Boya Song, also a current Ph.D. student in the laboratory of Professor James Rusling, completed a summer research internship at LabTech, Inc.

During Summer 2013, Kaddy Camara (Howell Group) and Christopher Kelly (Leadbeater Group) partook in internships at Boehringer Ingelheim Pharmaceuticals. Chris Lorenc (Peczuh Group) has been awarded a research fellowship at BI during the 2013-2014 academic year, while Christian Malapit (Howell Group) has been awarded a fellowship for the following academic year.

DEGREE RECIPIENTS

Bachelor of Science
Laura Baumann
Nyle Blanck
Zachary Cannone
Christopher Chen
Eric Commendatore
Marisia Fikiet
Paul Fogle
John Gallie
Brianna Galos

Gina Guerrera
Carmichael Gugliotti
Kendrick Henes
Faria Iqbal
Fatima Jaferi
On-You Jung
Christina Kim
Alexander Konefal
Alexandra Longacre
Kirian Mayall
Timothy Monos
Nicholas Morse
Rabang Muhajir
Alex Nguyen
Christopher Panagoulis
Jigish Patel
Nicholas Penrose
Jeffery Phu
Phillip Rzezycyki
Jonas-Mark Sacro
Kevin Santa Maria
Christina Scanlon
Patrick James Snay
Kevin Sterling
David Switala
David Tibodeau
Adam Woomer

Master of Science
Elizabeth Archer
Kyle Cole
Brian Gismervik
Randy Jackson
Nan Li
Kevin Lundgren
Jie Pan
Diandra Rudzinski
Donghui Song
Courtney Stanford
Chi Tang

Doctorate of Philosophy
Olumide Adebolu
Joshua Akhigbe
Christian Argueta
Bekim Bajrami
Victoria Briand
Sampada Chitale
Saminda Dharmaratna
Nicholas Eddy
Miriam Grace Enriquez
Michael Hyland
Aparna Iyer
Vijay Jasti
Cecil King’ondu
Ki-Ryong Lee
Yanke Liang
Donna Marie Mamangun
Vigneshwaran Mani
Megan Nollenberger
Junichi Ogikubo
Shenmin Pan
Paritosh Pande
Justin Reutenauer
Daniel Sandberg
Naimish Sardesai
Vindya Thilakarathne
John Adams, B.S. ’46 is now living in Milford, Connecticut. John Adams graduated from the University of Connecticut in 1946 with a major in chemistry; he had been in the Class of 1941, but because of the war, was unable to graduate with his class. Dr. Adams graduated with his Ph.D. from the St. Louis University Dental School in 1950.

Louis DiMauro, Ph.D. ’80 is the 2013 recipient of the William F. Meggers Award by The Optical Society (OSA). The William F. Meggers Award recognizes outstanding work in spectroscopy. Louis is currently the Edward E. and Sylvia Hagenlocher Chair/Professor of Physics at Ohio State University.

Ala Nassar, Ph.D. ’95 has taken a new position as Research Associate Professor at Northeastern University.

Sharon A. Malia, Ph.D. ’96 is currently the Director of Quality Control & Analytical Technology at Olympus Biotech Corporation in Hopkinton, MA.

Rajeev R. Vyas, Ph.D. ’96 is now a Principal Scientist at Shire Pharmaceutical in Lexington, MA.

Scott J. Nolan, Ph.D. ’98 is now a Principal Scientist, DMPK at EnVivo Pharmaceuticals in Watertown, MA.

Leilani Ramos, Ph.D. ’98 is now Associate Professor of Chemistry in the Department of Agriculture and Natural Sciences at Lincoln University in Jefferson City, MO.

Lisa Glieco Varshney, B.S. ’99 is now an Associate Partner at a consulting agency called Rosetta, working in their Marketing Strategy and Insights practice, continuing to do marketing strategy consulting for pharmaceutical clients. Lisa and her husband are living in NYC with their son, who is now 3.

John D’Angelo, Ph.D. ’05 has recently been granted tenure as an Associate Professor of Chemistry at Alfred University in Alfred, NY. John was also awarded the Dr. Sanford S. Cole and Frances Halderman Cole Chair in Chemistry.

Jeremy Koscielecki, Ph.D. ’06 has relocated to the Mobile, Alabama area and continues to work for DuPont as a Manufacturing Technology Supervisor. In his new role, Jeremy is supporting the DuPont Crop Protection business and the analytical laboratories at the Mobile Manufacturing Center. Jeremy and his wife Maureen just celebrated their daughter’s first birthday and are enjoying their new home near the gulf shores of Alabama.

Jackie Yu, Ph.D. ’06 has taken a new position as Research Group Leader at Alexion Pharmaceuticals, Inc. in Cheshire, CT.

Chris Taylor, B.S. ’07 is currently working as an Associate Product Manager at The Hartford and completed his MBA in May 2013. Chris’s fiancé will soon be graduating with a Ph.D. in chemistry.

Joseph Fournier, B.S. ’10 is a Ph.D. graduate student at Yale University in Dr. Mark Johnson’s group.

Yu Shi, Ph.D. ’10 is an Investigator in the Biopharmaceutical Analytical Sciences Department at GlaxoSmithKline. She is working on the development of analytical methodologies to analyze and characterize protein therapeutics.

Sadagopan Krishnan, Ph.D. ’10 began a new position as Assistant Professor of Chemistry at Oklahoma State University.

Meena Thakur, Ph.D. ’10 has accepted a new position as Scientist I, Pharmaceutical Sciences, Onyx Pharmaceuticals in South San Francisco, California.

Linlin Zhao, Ph.D. ’10, formerly a Postdoc at Vanderbilt University, has taken a new position as Assistant Professor at Central Michigan University.

Bhaskara Chikkaveeraiah, Ph.D. ’11 is a Postdoc at NIH, NIBIB in Bethesda, MD.

Ruchika Malhotra, Ph.D. ’11 has taken a new position as Research Chemist at Instrumentation Laboratory.

Bekim Bajrami, Ph.D. ’12 has accepted a research scientist position at Biogen Idec in Boston, studying neuro-degenerative diseases using proteomics tools.

Pamela Diego-Limpin, Ph.D. ’12 is currently working in a water laboratory in North Queensland, Australia. Pam acts as a Scientific Officer, working on method development and validation for the analysis of water quality.

Michael Hyland, M.S.’03, Ph.D. ’12: After Michael A. Hyland completed his M.S. in 2003, he joined the USAF where he rose through the ranks. After a few years as an instructor at the USAF Academy in Colorado Springs, he returned to UConn in 2009 on a full USAF scholarship and completed his Ph.D in 2012 from the Brückner group with work on chromene-annulated chlorins and bacteriochlorins. He then returned to active duty as a Captain to the US Air Force. Initially stationed at the Eglin AFB, Florida, he became Deputy Branch Chief of the High Explosives Research & Development Facility. He guided a team of 50+ scientists and technicians that worked on high explosives research, ranging from theory to fabrication/testing, to work on hard and deeply buried target weapons, insensitive munitions, nano energetics, and R & D with U.S. allies to assess new explosives. He was promoted to Major this spring and was deployed to Kabul, Afghanistan. There, he leveraged his explosives expertise as the Chief of the Counter-Improvised Explosive Devices Section for the NATO Training Mission-Combined Security Transition Command. He recently returned to the U.S. to resume his duties at Eglin AFB.

Vigneshwaren Mani, Ph.D. ’12 has begun a collaborative Postdoc between Singapore National Lab and MIT.

Shenmin Pan, Ph.D. ’12 has begun work as an Analytical Chemist at MacDermid Corporation.

Jaideep Saha, Ph.D. ’12 is now working at the University of Oxford as a Marie Curie Postdoctoral Research Fellow in the group of Dr. Stuart Conway.

Naimish Sardesai, Ph.D. ’12 has begun a Postdoc at Clarkson University.
Investing in the Future

The Chemistry Department has experienced significant growth over the last decade. Currently we have ~140 graduate students and 190 undergraduates in chemistry programs. While this is exciting for us, it is a challenge to provide essential enrichment opportunities in the face of shrinking budgets. The following UConn Foundation accounts help supplement the activities and opportunities that are a vital part of the UConn chemistry experience. We hope that you will assist us by contributing to the program that best represents your hopes for the future of the department.

An unrestricted Chemistry Department Account (20111)
This account is used to assist the Department in everything from maintaining supplies to making it possible for us to invite top-level scientists into the department.

The Chemistry Undergraduate Development Fund (22491)
This account will be used to enrich and expand the Department of Chemistry undergraduate program, from equipment and instrumentation, to making it possible for talented students to present their work at meetings, to scholarships.

The Alumni Graduate Student Development Fund (22492)
This account will be used to enrich and expand the Department of Chemistry graduate program, from helping us to attract the best quality graduate students, to summer support, to helping expand the research possibilities for talented students.

The Emeriti Fund for Undergraduate Chemistry Research (30496)
This account is used to fund internships for freshman and sophomores participating in the Undergraduate Research Apprentice Program (URAP). This offers a unique research opportunity for students just beginning their scientific career path.

Donations should be mailed to the UConn Foundation:
The University of Connecticut Foundation, Inc.
2390 Alumni Drive, Unit 3206
Storrs, CT 06269-3206
In the memo line, please note the fund(s) of your choice.

Or, visit our website:
http://clas.uconn.edu/giving

Alumni, We Want to Hear From You!

Send us your news, and we’ll feature your story in the next publication!

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