CONTENTS

01 MESSAGE FROM THE DEPARTMENT HEAD

02 CHEMISTRY NEWS

02 | Bloodless Sensors Monitor Diabetes Patients
03 | A New Way to Create Porous Materials
04 | UConn Chemist Discovers A New Way to Stabilize Proteins
05 | Breaking Bad: An Academic Minute with Nicholas Leadbeater
05 | Dr. James Bobbitt Receives Lifetime Achievement Award

03 DEPARTMENT NEWS

08 OUTREACH NEWS

08 | A Year to Volunteer

09 STUDENT NEWS

09 | Graduate Student Life: Outside the Lab
10 | Ion [Eye On] Shanghai
12 | Chemists Without Borders Arsenic Testing
13 | Chemistry Provides Student with Marketable Skills

16 ALUMNI NEWS

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THE DAILY CAMPUS
UCONN TODAY

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Dear Friends of UConn Chemistry,

These are exceptional times for UConn and for the Department! Our faculty continue to excel in the classroom, in their scholarly activities, and in their commitment to outreach. Within this newsletter we highlight research ranging from implantable biosensors to discovering a new way to stabilize proteins. This summer, we welcomed Dr. Eugene Pinkhassik to our new Green Emulsions, Micelles, and Surfactants (GEMS) Center. Dr. Pinkhassik comes to UConn from Saint Louis University with a focus on nanomaterials and nanodevices with new and superior properties. Also, we recognized Dr. James Bobbitt with a Lifetime Achievement Award for his many years of impressive scholarship, research, and service to the department.

There are now approximately 215 chemistry majors. Over the past year, increased enrollment levels remained consistent, further creating demands at each level of our undergraduate offerings. It is through the dedication of our faculty, teaching assistants, and laboratory technicians that we have been able to successfully meet these growing needs.

In addition to academics, nearly 115 undergraduates conducted research in our labs this past year. Over the summer, we also welcomed 26 undergraduate researchers to UConn via the Research Experience for Undergraduates (REU) and Universitas 21 partnership programs. While students from Fudan University and Shanghai Jiaotong University participated in research endeavors at UConn, two undergraduates spent the summer at Fudan University. We also congratulate the 34 students that graduated with a Bachelor of Science in Chemistry this spring.

Our graduate student enrollment remains steady at 140. In May, 9 Ph.D. and 7 M.S. degrees were granted. 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.

In our graduates students’ “spare time,” you may find them participating in a global Thanksgiving lunch, poster session, department holiday party, BBQ, softball game, or a student vs. faculty soccer match. Such activities allow graduate students to meet their new colleagues and to network with faculty, visitors, and each other.

The Department has also been actively engaged in the community over the past year. We have organized fundraisers for Philippine typhoon relief efforts, celebrated women in science at the Connecticut Science Center, and hosted nearly 100 middle school and high school students and their parents for a day of nanochemistry. Through these outreach initiatives, the department has demonstrated its commitment to assisting those in need and sharing science with others.

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.
According to the 2011 National Diabetes Fact Sheet from the Centers for Disease Control and Prevention, approximately 25.8 million people in the U.S. have diabetes. This statistic includes both Type I and Type II diabetes. Diabetes is a serious, life-changing disease that requires blood sugar levels to be monitored many times a day. However, here at the university, a group of research professors are developing an implantable, wireless biosensor that holds the potential of changing the face of this disease.

The research is being conducted by the laboratory teams of Board of Trustees distinguished professor of pharmaceutics Diane Burgess, chemistry professor Fotios Papadimitrakopoulos, and engineering professor Faquir Jain. The ultimate goal of the project is to develop a small, wireless, and completely implantable biosensor that will monitor diabetic patients’ blood sugar levels. This device will eliminate the use of a lancing device to extract a blood sample in order to check the blood sugar levels in a meter.

The model biosensor is about one-third of the diameter of a penny in size. The pint-size characteristic is important to minimize tissue damage in the person when the biosensor is implanted on the underside of the forearm near the wrist. Tissue damage is not the only obstacle; it is also critical, for the comfort of the patient, to prevent the body’s natural reactions to foreign objects like pain, inflammation, and redness.

To avoid these problems, part of the research focuses on developing a coating for the biosensor that will release a tissue response-modifying drug. The coating that is being developed has been shown to prevent infection and inflammation for a few months. The device is estimated to be able to reside under the skin for about three months before needing to be replaced.

The biosensor will also have an inner membrane that will stimulate catalytic reactions when it interacts with glucose. The reactions generate an electrical signal that can be recorded wirelessly with a watch-like meter. The meter will display blood sugar levels graphically over time.

This innovative technology could change the face of diabetes because it could help people live a more comfortable life while still effectively treating the disease. Type I diabetics will have the option of having the biosensor integrated with an insulin pump, putting an end to painful finger pricks.

The biosensor will detect the blood sugar level and work in conjunction with the pump to distribute the necessary insulin needed to maintain healthy blood sugar levels.

Meanwhile, an ambitious goal for Type II diabetics is to have the meter work to signal the person when they are partaking in activities or consuming foods that provoke spikes in blood sugar. If this new technology could bring awareness to Type II diabetics of these triggers, they could avoid them and effectively work in partnership with their body to rid themselves of diabetes. This biosensor could improve overall health and the quality of life for all diabetics.

Dr. Fotios Papadimitrakopoulos and colleagues were granted U.S. patent number 8,608,922 for their design entitled, “Biosensor for Continuous Monitoring of Metabolites and Proteins and Methods of Manufacture Thereof.”

This project is currently in the pre-clinical testing stage, but the researchers are hopeful they will be moving on to clinical trials and enter the market in the upcoming decade.

-Adapted from The Daily Campus
A team of UConn chemists has discovered a new way of making a class of porous materials that allows for greater manufacturing controls and has significantly broader applications than the longtime industry standard.

The process, more than three years in the making and outlined in the December 2013 edition of Nature Communications (Nature Commun. 2013, 4, 2952), has resulted in the creation of more than 60 new families of materials so far, with the potential for many more. The key catalyst in the process is recyclable, making it a ‘green’ technology.

Four patent applications related to the discovery are pending. VeruTEK, a chemical innovations company based in South Windsor, Conn., has secured rights to some of the materials.

“This is definitely the most exciting project I’ve been involved in over the past 30 years,” says Board of Trustees Distinguished Professor Steven L. Suib, the project’s principal investigator. “What we’ve done is similar to discovering a new insect, only now there is a series of families of these things that can be discovered. That’s pretty cool.”

The research is the first major work to come out of the University’s new GEMS Center of Excellence. The center, which gets its name from the acronym Green Emulsions, Micelles, and Surfactants, is located in the Department of Chemistry in the College of Liberal Arts and Sciences.

Suib’s research involves the creation of uniform, or monomodal, mesoporous metal oxides using transition metals such as manganese, cobalt, and iron. Mesoporous describes the size of the pores in the material. In this case, they are between 2 and 50 nanometers in diameter and are evenly distributed across the material’s surface, similar to what one might see if a pin is used to poke numerous holes in a material. Only the UConn process allows scientists to use nitric oxide chemistry to change the diameter of the “pin,” in order to change the size of the holes. This unique approach helps contain chemical reactions and provides unprecedented control and flexibility.

“Professor Suib and his colleagues report an unexpected and novel route to generation of mesoporous metal oxides,” says Prabir Dutta, distinguished university professor of chemistry and biochemistry at The Ohio State University. “Professor Suib’s discovery and the extension of mesoporosity to a much broader range of metal oxides is bound to push this area to new heights, with all sorts of potential applications, making this study a most important development in materials science.”

Having materials with uniform microscopic pores allows targeted molecules of a particular size to flow into and out of the material, which is important in such applications as adsorption, sensors, optics, magnets, and energy products such as the catalysts found in fuel cells.

“When people think about these materials, they think about lock-and-key systems,” says Suib. “With certain enzymes, you have to have pores of a certain size and shape. With this process, you can now make a receptor for specific proteins or enzymes so that they can enter the pores and specifically bind and react. That’s the hope, to be able to make a pore that will allow such materials to fit, to be able to make a pore that a scientist needs.”

For the past 20 years, scientists have relied on a long-standing, water-based procedure for making mesoporous materials that was first developed by Mobil Oil. That procedure, although groundbreaking when it was discovered, has limitations. The size of the pores in the material is difficult to manipulate; the walls of the resulting mesoporous structures are amorphous; and the stability of the underlying system weakens when exposed to high heat, limiting its use. The process also only works best when using silicon or titanium, as opposed to other metals of the periodic table.

“Such control of pore-size distribution, enhanced pore volumes, and thermal stabilities is unprecedented” the team wrote in its report.

Perhaps just as importantly, the team found that the process could be successfully applied to a wide variety of elements of the periodic table. Also, the surfactant used in the synthesis is recyclable and can be reused after it is extracted with no harm to the final product.

“We developed more than 60 families of materials,” says Suib. “For every single material we made, you can make dozens of others like it. You can dope them by adding small amounts of impurities. You can alter their properties. You can make sulfides in addition to oxides. There is a lot more research that needs to be done.”

The UConn research was funded by the U.S. Department of Energy’s Basic Energy Sciences division through a $420,000 grant over three years.

Suib believes the process will be attractive to industry because it is simple, cost-effective, and green.

“Adapted from UConn Today
UConn Chemist Discovers New Way to Stabilize Proteins

A UConn research team has found a way to stabilize hemoglobin, the oxygen carrier protein in the blood, a discovery that could lead to the development of stable vaccines and affordable artificial blood substitutes.

The team’s novel approach involves wrapping the polymer poly(acrylic acid) around hemoglobin, protecting it from the intense heat used in sterilization and allowing it to maintain its biological function and structural integrity.

In addition to having potential applications in the stabilization of vaccines and development of inexpensive artificial blood, the stabilizing polymer also allows vaccines and other biomedical products to be stored for longer periods without refrigeration. It could also have applications in biomaterials, biosensors, and biofuels.

“Protein stability is a major issue in biotechnology,” says Challa V. Kumar, UConn professor of chemistry and biochemistry and the primary investigator on the project. “What we’ve done is taken this protein molecule and wrapped it up in a polymer chain in order to stabilize it. In thermodynamics terms, we have restricted the entropy of the denatured state of the protein and stabilized it beyond our expectations. The system also exhibits a high degree of reversibility. The protein can be denatured and renatured many, many times. This is the very first example of its kind in the literature of all protein science. No one has ever been able to achieve this kind of stability for proteins.”

In searching for a viable material to serve as a protein stabilizer, Kumar’s team found one that is readily available, inexpensive, and can be modified chemically for further improvements.

The poly(acrylic acid) used in the study is the same material found in disposable diapers, and one of the most abundant synthetic polymers on the planet. This particular polymer, says Kumar, is very hydrophilic, meaning it likes water. The polymer naturally binds to hemoglobin, creating a tight seal that protects the protein molecule and allows it to retain its structural integrity even after heating it to 120°C for extended periods of time (steam sterilization).

Joining him on the project was Rajeswari Kasi, associate professor of chemistry, an expert in synthetic polymers and hybrid materials. The research team also included graduate students: Vamsi Mudhivarthi, Kyle Cole, Inoka Deshapriya, Caterina Riccardi, and Yuxiang Zhou, as well as undergraduate students Marc Novak and Westley Kipphut.

Kumar is proud of the fact that undergraduates participated in such a major research endeavor. “One of our missions at the University is to train undergraduates in the fundamentals of their structure and function."

The team tested various protein-polymer compositions using transmission electron microscopy (TEM) and optical spectroscopy techniques. The research was supported by multiple grants from the National Science Foundation, topping $3 million over the past 10 years.

In a paper published last year in the Journal of Materials Chemistry (J. Mater. Chem. 2012, 22, 20423-20433), Kumar and his team showed how hemoglobin wrapped in low molecular weight poly(acrylic acid) formed nanoparticles that retained their natural state and structure, even after they were subjected to the harsh conditions of steam sterilization. Under the same conditions, hemoglobin samples that were not wrapped in the polymer lost the majority of their structure and function.

Kumar said these test results signaled the project’s breakthrough moment.

As part of its research, the team chose to examine the feasibility of using hemoglobin as an artificial blood substitute. Hemoglobin, when extracted from blood, breaks down and is toxic in its pure form. Since hemoglobin is the critical oxygen carrier protein in blood, Kumar and his team are looking at ways of stabilizing hemoglobin in its natural form so that it retains its activity and stays harmless when administered as a transfusion agent. This could lead to a new substitute for human blood, which is frequently in short supply. Blood shortages are expected to get worse in coming years, as more and more people in the world are likely to need blood transfusions, Kumar said.

The research has caught the attention of scientists at Merck, a global leader in prescription medicine, vaccines, and biologic therapies.

“Being able to control the placement of proteins in polymer matrices of defined size brings exciting opportunities for producing potent and heat-stable vaccine antigens,” says Henryk Mach, a senior investigator with Merck’s vaccine drug product development division. “Prof. Kumar’s work may well provide technologies for vaccine delivery in the developing world.”

The abundance of the polymer, the flexibility of the process, and the simplicity of the approach enhances its potential for mass production, Kumar says. Kumar and the rest of the UConn research team are working with the University’s Technology Partnerships and Licensing group of UConn’s Office of Economic Development, and a U.S. patent application has been filed for the new technology.

Adapted from UConn Today
Breaking Bad: An Academic Minute with Nicholas Leadbeater

Chemist Nicholas Leadbeater has a knack for explaining science clearly and simply. In 90-second spots, known as the Academic Minute, Professor Leadbeater explains the science behind common concepts. The Academic Minute segments are produced by PBS’s WAMC Radio out of Albany, New York. In a three-part series, Professor Leadbeater examines the chemistry behind the hit television show Breaking Bad.

**Walter White’s Meth**

On the blockbuster TV show “Breaking Bad,” down-on-his-luck chemistry teacher Walter decides to make some money for his family by producing narcotics. He uses his chemistry background to make N-methylamphetamine, known as crystal or meth. Converting over-the-counter pseudoephedrine, a decongestant, to meth takes two steps and releases the highly toxic gas phosphine. But the real problem is that the amount of pseudoephedrine in each box of cold remedy is pretty small so they’d need a lot of boxes to be able to make a reasonable amount of meth. Walt would have to go to multiple pharmacies every day just to get enough starting material, so he takes a different approach. He decides to react a compound called phenyl acetone, or P2P, with another chemical called methylamine. This gives what Walt and his co-conspirators lure them into a trailer where they then throw some red phosphorous into a pot of boiling water, run out and lock the door. Emilio is killed by the resulting poisonous phosphate gas that is formed. But would that really happen? Well, not all phosphorous is created equal. There are a number of so-called allotropes of phosphorous. Allotropes are different arrangements of atoms of the same element. Take for example carbon—two allotropes of that element are diamond and graphite—they have very different properties. Likewise, red and white phosphorous are different. White phosphorous is very reactive and, when exposed to air and water vapor, will catch fire and rapidly generate poisonous phosphate gas. Red phosphorous on the other hand is less reactive and won’t readily lead to the noxious gas. Red phosphorous does, however, have its uses. It is a key ingredient in safety matches. When you strike a safety match, the friction generates heat, converting a small amount of red phosphorous to white phosphorous vapor. The white phosphorus then spontaneously ignites. So, had Walter used the right kind of phosphorous, his boiling chemistry concoction would have indeed proved deadly to his foe.

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**Instant Poison Gas**

Chemistry teacher Walter uses his science knowledge to his benefit to make some money by producing crystal meth. But he fast realizes that violence is commonplace in the narcotics business. When he finds himself in a difficult situation, what does he turn to? Chemistry of course! He needs to get the small-time drug dealers Emilio and Crazy-8, off his case so Walter and his co-conspirators lure them into a trailer where they then throw some red phosphorous into a pot of boiling water, run out and lock the door. Emilio is killed by the resulting poisonous phosphate gas that is formed. But would that really happen? Well, not all phosphorous is created equal. There are a number of so-called allotropes of phosphorous. Allotropes are different arrangements of atoms of the same element. Take for example carbon—two allotropes of that element are diamond and graphite—they have very different properties. Likewise, red and white phosphorous are different. White phosphorous is very reactive and, when exposed to air and water vapor, will catch fire and rapidly generate poisonous phosphate gas. Red phosphorous on the other hand is less reactive and won’t readily lead to the noxious gas. Red phosphorous does, however, have its uses. It is a key ingredient in safety matches. When you strike a safety match, the friction generates heat, converting a small amount of red phosphorous to white phosphorous vapor. The white phosphorus then spontaneously ignites. So, had Walter used the right kind of phosphorous, his boiling chemistry concoction would have indeed proved deadly to his foe.

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**Dissolving Acids**

Walter and his co-conspirators have to get rid of a dead body. Instead of just burying it in the ground out of sight, they decide to make it completely disappear. Walter’s accomplice Jesse decides to fill his bathtub with hydrofluoric acid and stick the corpse in there. The body does indeed start to disappear, but not before the bathtub also dissolves, then the floorboards, dropping the ghastly remains all over the corridor below.

So what went wrong? Well hydrofluoric acid, which is a solution of the chemical compound hydrogen fluoride in water, eats through many materials, the only real exceptions being some plastics. That’s why it is stored in plastic bottles and not glass bottles like many other acids. If Jesse had taken Walter’s advice and picked a plastic container and not the bathtub, the venture may have been more successful. Using hydrofluoric acid, Jesse also risked serious harm to himself, because the acid can pass unhindered through body tissue, causing deep burns, and once absorbed into blood through the skin, it also reacts with blood calcium and may cause a heart attack. Jesse would have been better off using a base rather than an acid. Sodium hydroxide, or lye as it’s often called, would be a much superior choice. It is much easier to handle, yet could still dissolve flesh and bone. And as it’s found in many common drain cleaners, it won’t dissolve the bathtub. So even though acids are often thought of as the most dangerous chemicals, their opposites, bases, can be just as destructive over time.

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**Adapted from UConn Today**

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**Dr. James Bobbitt Receives Lifetime Achievement Award**

This past April, we celebrated Dr. James Bobbitt’s many contributions to the department and presented him with a Lifetime Achievement Award. Jim arrived at UConn—sans beard—in 1956 as a 26 year old instructor. It might be noted that most of our current faculty had not yet been born when Jim accepted UConn’s offer of a position! During his tenure as department head from 1977 – 1982, he was instrumental in charting a course for the department that resulted in the growth and strengthening of our graduate program, along with a significant increase in the number of research-active faculty. Jim is a superb teacher in the broadest sense of the term. He is justly proud of the Alumni Association Award for Outstanding Teaching that he received in 1994.

Jim “retired” in 1992 having mentored 31 M.S. and Ph.D. students. Before earning emeritus status, Jim published 84 peer-reviewed research articles in a number of different areas of chemistry, ranging from alkaloid natural products through organic electrochemistry to his current interest in the use of oxoammonium salts to affect selective oxidations.

Jim’s wife, Jane Ann, would take issue with the claim that Jim retired 23 years ago: indeed, Jim has published over 30 articles since “retirement,” the most recent earlier this year (J. Org. Chem. 2014, 79, 1055). He can be found—on virtually any day of the week—in his lab running reactions, mentoring undergraduates, and offering sage advice to graduate students who seek his council. “It’s my hobby,” claims Jim. That is undoubtedly true, and we are all grateful that he never developed an interest in golf.

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**William Bailey, Professor**

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**William Bailey, Professor**
DEPARTMENT News

Faculty & Staff News

GRANT HIGHLIGHTS

AMY HOWELL & JOSÉ GASCON AWARDED NIH GRANT
Dr. Amy Howell is the PI on an awarded $1.95M, multi-institutional grant, “Harnessing NKT Cell Activation by Glycolipids.” Dr. José Gascon is a UConn co-investigator on this grant.

NIH/NIEHS RENEWS RUSLING’S $1.9M GRANT
Dr. James Rusling and Co-PI Dr. John Schenckman (UCHC) have received an ~$1.9M award renewal from the National Institutes of Health (NIH) and the National Institute of Environmental Health Sciences (NIEHS) for their project entitled, “Enzymatic Studies of Enginee...”

STEVEN SUIB RECEIVES DOE GRANT
Dr. Steven Suib and Dr. Pu-Xian Gao (PI, Materials Science & Engineering) were awarded a $1.5M, 2 year DOE grant, “Metal Oxide Nano...”

JAMES RUSLING RECEIVES GRANT FOR STUDY OF PROSTATE CANCER TREATMENTS
NIH/National Institute of Biomedical Imaging and Bioengineering has granted Dr. James Rusling an ~$1.4M award for “Protein Biomarker Arrays for Personalized Treatment of Prostate Cancer.”

JOSÉ GASCON & ALLISON MACKAY RECEIVE COLLABORATIVE GRANT
Dr. José Gascon and Dr. Allison Mackay (Chemistry/Civil & Environmental Engineering) recently received funding from the NSF for a proposal entitled, “Organic Cation Interactions with Soil Alumino-silicates: Structure...” in the amount of $410,000.

YAO LIN’S PROPOSAL FUNDED BY NSF
Dr. Yao Lin’s proposal, “Supramolecular Assembly of Charged Nanoparticles: Understanding the Nucleation Process that Connects Kinetic and Equilibrium Behaviors,” has been funded by the NSF Division of Chemistry for $300,000.

MICHAEL HREN RECEIVES NSF GRANT
Dr. Michael Hren has received a $203,500 NSF grant for a project entitled, “Collaborative Research: Integrated Data-Model Analysis of CO2-Climate Vegetation Feedbacks in a Dynamic Paleo-Icehouse.”

JING ZHAO RECEIVES ACS AWARD
Dr. Jing Zhao has received an award from the American Chemical Society—Petroleum Research Fund for a project entitled, “Probe Nanoscopic Catalytic Sites with Surface-enhanced Raman Scattering using Core/Shell Nanoparticles” in the amount of $100,000.

PUBLICATION HIGHLIGHTS

ACS MACRO LETTERS

CHEMICAL SCIENCE
A paper in Chemical Science reports the results from a collaboration between Dr. Leadbeater’s group and Stonehill College. The work, focused around the preparation of trifluoromethyl-substituted cyclopropanes, was performed by graduate students at UConn and a team of almost 20 undergraduates at Stonehill, under the supervision of Professor Leon Tilley. Dr. Mercadante, M.; Kelly, C.; Hamlin, T.; Gorbatyuk, V.; Leadbeater, N.; et al., “1,3-silyl Elimination in Electron-Deficient Cationic Systems” Chemical Science, 2014, 5(10), 3983-3994.

JACS
Research conducted by Dr. José Gascon, Dr. Fotios Papadimitrakopoulos, graduate student Milinda Samaraweeru, and graduate student Roholah Sharifi has been featured in the Journal of the American Chemical Society. The full paper, “Thermodynamics of the Quasi-Epitaxial Flavin Assembly around Various-Chirality Carbon Nanotubes,” introduces a thermal dissociation method based on reversible H/02 doping to determine SWNT/surfactant thermodynamic stability values with greater accuracy. Dr. Sharifi, R.; Samaraweeru, M.; Gascon, J.; Papadimitrakopoulos, F., “Thermodynamics of the Quasi-Epitaxial Flavin Assembly around Various-Chirality Carbon Nanotubes” J. Am. Chem. Soc., 2014, 136(20), 7452-7463.

LANGMUIR
Langmuir features the work of Dr. Eugene Pinkhassik and collaborators as their cover image. The featured work investigates the self-assembly of surfactant scaffolds with monomers acting as molecular building blocks in the directed assembly of organic nanostructures. Under certain conditions, surfactants and monomers spontaneously form vesicles containing monomers in the hydrophobic interior of surfactant bilayers, leading to the successful synthesis of hollow polymer nanocapsules. Dr. Kim, M.; Dergunov, S.; Shmakov, S.; Pinkhassik, E.; et al., “Facile Directed Assembly of Hollow Polymer Nanocapsules within Spontaneously Formed Catanionic Surfactant Vesicles” Langmuir, 2015, 30(24), 7061-7069.

PHYSICAL CHEMISTRY
In collaboration with the group of Engineering Professor Dr. Quing Zhu, the group of Dr. Christian Brückner reported on the evaluation of a class of dyes as contrast agents for potential early breast cancer event screens using the non-
invasive photoacoustic imaging technique, a modality that utilizes the phenomenon that the absorption of pulsed light by some dyes sends out sound waves that can be picked up with medical ultrasound equipment. Dr. Challa V. Kumar joins UConn Faculty  Dr. Eugene Pinkhassik graduated from the University of Kazan and obtained a Ph.D. at the Institute of Chemical Technology, Prague in Czech Republic with Ivan Stibor. Following a postdoctoral fellowship at the University of Colorado at Boulder with Josef Michl, Dr. Pinkhassik held faculty positions at the University of Memphis and Saint Louis University. His research interests focus on making nanomaterials and nanodevices with new and superior properties to address current problems in energy-related technologies, medical imaging and treatment, and environmental sensing.

YAO LIN RECIPIENT OF DIRECTOR'S AWARD FOR FACULTY EXCELLENCE
Dr. Yao Lin was the recipient of the Director’s Award for Faculty Excellence at the 2014 Polymer Program Awards. The award was established to recognize excellence and leadership in teaching, research, and service to the program.

CHEMISTRY PROFESSORS ELECTED TO MEMBERSHIP IN CT ACADEMY OF SCIENCE AND ENGINEERING
Adjunct Professor Frank Galasso, Joint Professor Robert Mason, Joint Professor Richard Parnas, and Professor Gregory Sotzing, have been inducted into the Connecticut Academy of Science and Engineering (CASE).

YAO LIN RECIPIENT OF DIRECTOR'S AWARD FOR FACULTY EXCELLENCE
Dr. Yao Lin was the recipient of the Director’s Award for Faculty Excellence at the 2014 Polymer Program Awards. The award was established to recognize excellence and leadership in teaching, research, and service to the program.

JING ZHAO WINNER OF STARTER GRANT AWARD PROGRAM
Dr. Jing Zhao has been selected the winner of the Spectroscopy Society of Pittsburgh (SSP) 2014 Starter Grant Award Program.

HARRY FRANK RECEIVES OTTO ISLER AWARD
Dr. Harry Frank has received the 2014 Otto Isler Award for Chemistry from the International Carotenoid Society for a lifetime of achievement in research on carotenoids and for dedicated service to the carotenoid field.

JAMES RUSLING RECEIVES BIOELECTROCHEMISTRY PRIZE OF ISE DIVISION 2
Dr. Jim Rusling has been selected as the winner of the Bioelectrochemistry Prize of ISE Division 2, in recognition of his research activities on thin biosystems for bioelectrochemical applications, direct electron transfer with proteins, bioelectrochemical catalysis, and detection of cancer biomarkers.

NEW FACULTY
DR. EUGENE PINKHASSIK JOINS UCONN FACULTY
Dr. Eugene Pinkhassik graduated from the University of Kazan and obtained a Ph.D. at the Institute of Chemical Technology, Prague in Czech Republic with Ivan Stibor. Following a postdoctoral fellowship at the University of Colorado at Boulder with Josef Michl, Dr. Pinkhassik held faculty positions at the University of Memphis and Saint Louis University. His research interests focus on making nanomaterials and nanodevices with new and superior properties to address current problems in energy-related technologies, medical imaging and treatment, and environmental sensing.

YAO LIN RECEIVES FUNDING FOR SABBATICAL IN EUROPE
Dr. Yao Lin has received funding for a "Research Opportunity in Europe for NSF CAREER Award". This award will provide funding for his Spring 2015 sabbatical stay in the lab of Dr. E.W. Bert Meijer at Eindhoven University of Technology.

CHALLA V. KUMAR AWARDED FULBRIGHT FELLOWSHIP
Dr. Challa V. Kumar has been awarded a Fulbright fellowship, one of five Flex awards from Fulbright, to visit India. The title of Dr. Kumar’s project is: “DNA-based light harvesting complexes for solar energy capture and conversion.” His primary host in India is its premier institution, the Indian Institute of Science, Bangalore. He will also spend time with the National Institute of Interdisciplinary Science and Technology, Trivandrum.
PHILIPPINE TYPHOON RELIEF EFFORTS
In November 2013, Typhoon Haiyan made landfall in the Philippines, causing widespread devastation. In support of relief efforts, the Chemistry Department hosted a “Coin War” fundraising competition, bake sales, and sold matching UConn Chemistry T-shirts. In total, over $2,000 was donated to the American Red Cross.

CONNECTICUT SCIENCE CENTER
Dr. Amy Howell and several female graduate students represented UConn at the Connecticut Science Center’s “Celebrating Women in Science” event. The group made homemade ice cream and demonstrated the cooling properties of liquid nitrogen.

CENTER FOR TALENTED YOUTH
Five IMS/Chemistry faculty (Challa Kumar, Douglas Adamson, Jing Zhao, Anson Ma, and Yao Lin) organized a one-day STEM workshop of “Chemical Approaches to Nanomaterials” through a partnership with John Hopkins Center for Talented Youth (CTY). Approximately 100 middle school students, high school students, and parents from 10 different states attended the workshop. During the workshop, the students and their parents learned about fundamental concepts in nanochemistry and nanomaterials by attending a plenary lecture by Dr. Kumar, followed by short talks by Drs. Adamson, Zhang, and Lin. Students and their parents conducted experiments together in nanochemistry, which included synthesis and characterization of nanoparticles and evaluation of their properties. More than 20 graduate students from the research groups of the above faculty assisted in the workshop.

CONNECTICUT MIDDLE SCHOOL SCIENCE BOWL
The University of Connecticut welcomed approximately 250 students to the Middle School Science Bowl (MSSB) competition. The MSSB features a Jeopardy-style event in addition to a battery-powered car race.

MENTOR CONNECTION
Dr. Kumar and his group welcomed 6 high school students to work in the labs through the UConn Mentor Connection program. The students focused on: Green Energy—Solar Hydrogen and Biological Nanomaterials.

SUMMER UNDERGRADUATE RESEARCH
In Summer 2014, UConn Chemistry hosted 9 students from 9 different universities through the Research Experience for Undergraduates (REU) program. Throughout the summer, UConn Chemistry also hosted a total of 26 students from 14 different universities, including 3 different countries (U.S., China, and France).
GRADUATE STUDENT LIFE: OUTSIDE THE LAB

PHI LAMBDA UPSILON EXECUTIVE BOARD
Left to Right: Dr. Mark Peczuh (Advisor), Christopher Dietz (Vice President), Gayatri Phadke (Treasurer), Julie Jenkins (President), Nicole Sassau (Social Chair) & Kelli Rutledge (Secretary).

GRADUATE POSTER SESSION
The Graduate Student Advisory Council (GSAC) organized a poster session on May 27, 2014. This poster session offered graduate students an opportunity to present their research to their colleagues and to expose the summer REU students to the research taking place in the department. A total of 57 posters were featured, and prizes were awarded for top posters in each field.

GLOBAL THANKSGIVING
Faculty, staff, and students mingle at the annual Global Thanksgiving Lunch. All are invited to bring a dish from their home country/state to share, while music from different countries plays in the background.

PHI LAMBDA UPSILON ANNUAL HOLIDAY PARTY
Students and staff gather at the annual holiday party.

PLU BBQs
PLU BBQs celebrate the end of the school year and mark the beginning of the next.

ROCK CATS GAME
PLU and the summer REU students enjoy a baseball game played by the local New Britain Rock Cats.

MEET & GREET POTLUCK
Faculty and graduate students converse as they enjoy a potluck meal.

SOFTBALL
UConn Chemistry’s summer softball team, “Acids & Bases,” competes against other softball teams organized throughout the university.

SOCCER GAME
During new graduate student orientation, UConn Chemistry hosted a soccer game in which faculty and staff competed against graduate students. Although the game was close, the faculty/staff team was the victor.
Universitas 21 Partnership

Since 2012, the Chemistry Department at the University of Connecticut has been actively developing international collaborations with other Universitas 21 institutions (the leading global network of research universities), such as Fudan University and Shanghai Jiaotong University (SJTU) in China. The partnership has provided great channels for the exchange of students, scholars, and educational resources.

Joint research workshops were held in Shanghai in 2012 and in Connecticut in 2013. Ten undergraduates from Fudan University and SJTU have since conducted summer research at UConn. In Summer 2014, six more students traveled to our campus, and we visited them in Shanghai as well! Professor Michael Smith, Thomas Seery, and Yao Lin gave short courses at Fudan University and SJTU in July, and we (undergraduate students Tania Mohamed and Stuart Mehrens) carried out organic chemistry research at Fudan University. Here, I (Tania) will detail our experiences inside and outside the lab!

Life at Fudan University

Stuart and I have been at Fudan University for over three weeks now, and campus life is great. We are staying at the residence hall for international students. It is equipped with air conditioning and cable television (TV included). As for food, we usually grab a light breakfast from Food Mart, and for lunch and dinner, we alternate between the two canteens located on campus. Occasionally, we have dinner at the local restaurants just outside the campus (our favorite place is Hot Pot). The best way to get around is by bicycle, but we have yet to purchase one.

We are really enjoying working in the research lab. Our research group has twenty graduate students, four undergraduates, and three professors. The professors are Dr. Li Zhan-Ting, Dr. Zhang Danwei, and Dr. Wang Hui. The research group meets once a week on Thursday evenings. Each group member gives a presentation every two weeks on their ongoing research. Stuart and I will begin presenting soon.

I work with a graduate student named Chen Lan, and Stuart works alongside Wang Wei Kun, also known as Huai Kun (Bad Kun). Chen Lan is a second-year graduate student. He received his Bachelor of Science in Chemistry from East China University of Science and Technology (ECUST) in Shanghai. He is currently working on his Ph.D. in organic chemistry, and his research focuses on charge transfer induced foldamer polymers. After he graduates, he hopes to work as a professor at Fudan University and become a member of the Chinese Academy of Sciences.

Huai Kun is also a second-year Ph.D. candidate. He received his Bachelor of Science in Chemistry at Guangxi University. His research involves molecular machines. After he graduates, he hopes to work as a professor at Shanghai Institute of Organic Chemistry (SIOC).

A few days ago, Professor Peter Stang, editor of the Journal of the American Chemical Society, visited Shanghai and gave a talk at SIOC. There is a bus that transports Fudan students to SIOC free of charge, but this time, we decided to take the taxi.

On the weekends, Chen Lan and Huai Kun showed us different tourist attractions around the city. There is a shopping mall about a 15-minute walk from campus. It is also convenient that Walmart and the subway station are located in that area. So far we were able to visit Nanjing Road, the Bund, and Yuyuan Garden via the subway. The subway system is quite easy to navigate because the maps are marked clearly and the signs are in English.
International Symposium on Macrocyclic and Supramolecular Chemistry

From June 7-11th, Stuart and I volunteered at the 9th International Symposium on Macrocyclic and Supramolecular Chemistry (ISMSC), which was held at Shanghai Institute of Organic Chemistry (SIOC). The ISMSC started as two separate meetings: the International Symposium on Macrocyclic Chemistry (ISMCC) and the International Symposium on Supramolecular Chemistry (ISSC). The ISMC was founded in 1977 by Reed M. Izatt and James J. Christensen, and the ISSC meetings began soon after in 1980. The two meetings joined in 2006.

This event was organized by faculty from SIOC, Chinese Academy of Sciences, and Fudan University, with Professor Zhan-Ting Li (our research advisor) as the chief organizer. The conference covered areas in macrocyclic and supramolecular chemistry, along with materials and nano sciences. Some notable speakers included Dr. Kimoon Kim, Dr. Julius Rebek, Dr. Jeremy Sanders, and Dr. James Fraser Stoddart.

Two poster sessions were held on the first and third day of the conference. A panel of judges presented the RSC poster awards to five students.

As volunteers, our tasks included registering all the conference participants, preparing the food and drinks for coffee breaks, collecting meal tickets during lunch, and helping professors set up their computers before their presentations. Volunteers were also needed to assist a tour guide during the one-day excursion to Zhujiaziao, which is an ancient water town. Luckily for Stuart and me, this gave us the opportunity to visit this historic town for the first time.

Group Traditions

In Professor Li’s group, whenever someone graduates, the person will treat the whole group to a nice dinner. Yu Junlai graduated with his master’s degree last week, so we went out to eat at a nearby restaurant.

Another group tradition is that when one of the students publishes a paper, he or she will treat a few friends to dinner. Chen Lan recently published a paper in Tetrahedron; eight of us went to a local restaurant to celebrate his accomplishment.

Trip to Beijing

From June 13-17th, Chen Lan, Huai Kun, and the rest of the graduate students had to grade the college entrance exams. Since we wouldn’t be doing any experiments during this time, Professor Li allowed Stuart and me to travel around China for the week. Stuart visited his friend in Changsha, while I went to Beijing with my friends.

For anyone who plans to visit China and does not speak Chinese, I highly recommend TravelChinaGuide.com. I booked my high-speed train ticket and hotel on this website. The train departed from Hongqiao Railway Station, which was about an hour away from the campus via subway. It went directly to Beijing South Railway Station, which took about 5 hours.

The hotel where we stayed was called Days Inn Forbidden City. The staff spoke English and provided us with information about the attractions we wanted to visit. The location of the hotel was great because it was a 10-minute walk from the Tiananmen East Subway Station. It was also very near to the Forbidden City and Tiananmen Square.

Something that I recommend doing is to plan out which attractions you want to visit, and then refer to TravelChinaGuide.com for more information. We only had 3 full days to explore, so we planned each day according to how far the places were from our hotel. We went to Forbidden City and the Temple of Heaven on the first day, Summer’s Palace and Tiananmen Square on the second day, and The Great Wall on the third day. The website has information on how to get to these places, the price of the entrance fees, and the recommended time that you should spend at each.

Most of the places are accessible by subway, except for The Great Wall, where you have to take a bus. The subway system in Beijing was excellent. I used the app Explore Metro, which is available for Androids and iPhones. If you know which station you want to go to, it will tell you where you need to transfer subway and the estimated time for the trip.

Last Week in China

During our last week in China, we went on a day trip to a nearby city called Suzhou in Jiangsu Province. It was about a twenty-minute ride by fast train from Shanghai. We visited the Humble Administrator’s Garden and the Tiger Hill.

One of our last dinners together was at a restaurant called Yeli Xiali located in Wujiachang. The restaurant served cuisine from Xinjiang Province, which tasted very similar to Turkish cuisine.

Before we left, we presented the gifts from the UConn Chemistry Department to the graduate students and professors. They were very appreciative and also gifted Stuart and me with souvenirs from Fudan University.

I would like to thank Professor Li and Professor Zhang for allowing us to work in their lab, and all the graduate students who helped us during our stay. I especially want to thank Chen Lan, Huai Kun, and Guo Rong, who spent the majority of their time with us. Lastly, I would like to thank the UConn Chemistry Department for giving us this opportunity to go to Fudan University.

-Tania Mohamed, B.S. ’15
During the Spring 2014 semester, twenty eight students from the CHEM 1127 class at the Waterbury Campus participated in a study—along with five other groups across the country—as part of the Arsenic Education Project in Bangladesh, conducted by the organization Chemists Without Borders in conjunction with the ACS and UNICEF.

Most Bangladeshis obtain their drinking water from tube wells that have been installed in the country since the 1970s in order to provide safe drinking water to the population. By the early 1990s, villagers across the country started showing symptoms of severe arsenic poisoning. It was discovered that naturally occurring arsenic was being released from underground sediments into the groundwater in the wells. Various teams have been dispersed throughout the country to test wells, and in many of the wells, the arsenic concentration has been found to be well above the World Health Organization safe limit of 10 ppb. New wells continue to be built and there are still many that remain to be tested. Filters exist that can effectively remove arsenic from water. The goal of this particular project is to deliver arsenic test kits and arsenic removal systems to Bangladeshi high schools in affected areas and to train students in their use. It is hoped that educating students about the dangers of arsenic and the available solutions will prove to be an effective way to educate the population at large.

The role of the participating student groups in this country was to compare two different commercial arsenic test kits for accuracy and reproducibility and to develop a protocol that would be appropriate for high school students to follow.

The results of our UConn study have been summarized in a report that was recently sent to the Chemists Without Borders project coordinator. The UConn students were very enthusiastic about participating in this project, and all expressed satisfaction that they were able to use their knowledge of chemistry to help people in another part of the world.


-Nina Stein, Assistant Professor, Waterbury Campus
Before Sun Products Corp. hired UConn chemistry major Casey Camire as a summer intern, students studying engineering typically dominated the internship application pool.

Many companies, like Trumbull, Conn.-based Sun Products, which develops and markets household cleaning supplies, typically look first for chemical engineering college students when recruiting for their internship programs. But chemistry major and math minor Camire knew that, with his background in chemistry and applied laboratory experience, he too could be a good fit for such a job.

“After my experiences there, they are now looking for more chemistry students,” he says.

Camire says he was able to market himself for his internship at Sun Products Corp. by showing—through a resume he posted on the Center for Career Development’s Husky Career Link—that the analytical skills he learned in his chemistry classes and his practical laboratory knowledge from three years of research experience were applicable to a real-world chemistry research environment.

 “[Chemistry students’] training isn’t just in chemistry; it’s in problem solving,” says Camire. “It’s our ability to tease apart the variables.”

After posting his resume on Husky Career Link, he heard from several different companies. He says his analytical and instrumentation classes prepared him for the research and development work he did at his internship.

In his senior year of high school, Camire was a participant in the UConn Mentor Connection, a summer program designed by the Neag School of Education’s Center for Gifted Education and Talent Development to provide exceptional high school students the opportunity to work with UConn science professors on fun and creative laboratory experiments. He says that working with former UConn assistant professor Shawn Burdette through the UConn Mentor Connection not only encouraged him to attend UConn, but also helped him establish an interest in organic and analytical chemistry.

“Ever since starting here at UConn I’ve been involved in undergraduate research, and that has been the most consistent part of my chemistry experience,” Camire says. “I like research because you learn techniques that are marketable in this economy.”

He says his analytical chemistry class in particular utilized what he learned in physical chemistry and organic chemistry, and applied that knowledge to teach students how to solve real-world problems.

Recently, he was honored by the American Chemical Society’s Division of Analytical Chemistry with a national excellence award given yearly to an outstanding undergraduate student.

Professor emeritus of chemistry, James Stuart, with whom Camire is currently conducting research, says the award recognizes Camire’s outstanding ability to perform analytical chemistry. Stuart is teaching him how to use natural and synthetic antioxidants in biodiesel processing and testing, as well as for industrial research.

“Dr. Stuart is showing me lots of practical skills, like taking apart and putting tools back together,” says Camire, “and training me on a bunch of different standard testing procedures.”

Camire says his lab classes and internship at Sun Products convinced him that he wants to pursue a career in the constantly evolving chemistry research industry. His exceptional performance at Sun Products over the summer earned him an extension of his internship during the winter break.

“It’s fast-moving, challenging, and unpredictable work. I was simply given a problem and asked to solve it any way I could,” he says. “This meant I came to work each day not knowing exactly what I was going to do that day, and that freedom from monotony was very appealing.”

Stuart notes that being enthusiastic and adaptive are both key to succeeding in industry, and he is confident that Camire’s intelligence and eagerness to learn will lead him to success.

“In this day and age, things are moving so fast that you just have to be able to adapt and keep on learning,” says Stuart. “It’s up to you to take that initiative to the next level.”

-Adapted from UConn Today
STUDENT ATHLETE EXCELS IN THE CLASSROOM, LAB & ON THE COURT

Student Athlete Patrick Lenehan has been on UConn’s men’s basketball team for the past three years. He not only played basketball as part of the 2013 championship team, he also excelled in the classroom with numerous awards which include the Presidential Scholar, Goldwater Fellowship, and University Scholar. He has been named to the 2013-2014 American Conference All-Academic Team. He also made time to conduct research in the laboratories of Drs. Kasi and Kumar during his freshman and sophomore years and published a full research paper in the journal Langmuir (2014, 30, 5176-84) and continued his research in Dr. Mellone’s lab in the department of Molecular and Cell Biology. He plans to attend medical school after graduating from UConn. The following is his account of how it all happened:

“We had visited AT&T stadium earlier in the season when we played Southern Methodist University, but at that time, the field was set up for a college football bowl game. We took a tour of the stadium and Coach Ollie told us that this is where we had to get back to in April. Walking out to the floor for our first practice was an indescribable moment for everyone on the team. The 80,000 seats surrounding the elevated court was a sight unlike anything I had ever seen in athletics before. During the rest of the week leading to the game, the atmosphere was great. We were very focused on the games—watching film and practicing each day—but there was also a huge number of UConn fans staying in our hotel, so we really felt the support from home. Every moment that I spent there was something I only could have dreamed of as a kid growing up or even while playing basketball in high school. After the game, I got to cut down a piece of the net and stand with the team on stage as we received the National Championship trophy. This summer, we went with the women’s team to Washington, D.C. and met President Obama at the White House, where he congratulated us on our successes on and off the court. It was definitely a year beyond anything I could have imagined and one that I hope to experience again in my last year here.”

STUDENT NEWS

UNDERGRADUATE STUDENTS

STUDENT RECEIVES HONORABLE MENTION IN NATIONAL SCHOLARSHIP COMPETITION

Rebecca Wiles, an undergraduate in the group of Dr. Nicholas Leadbeater, has received an Honorable Mention in the 2014 national Barry M. Goldwater Scholarship competition for Excellence in Education. The scholarships, in commemoration of Senator Barry Goldwater, are designed to foster and encourage outstanding students to pursue careers in the fields of mathematics, the natural sciences, and engineering. Becky is also a University Scholar and a member of the Honors Program.

CHEMISTRY STUDENTS TO SERVE ON INAUGURAL STUDENT LEADERSHIP BOARD

Students Morgan Alexander and Kimberly Rebello have been selected to serve on the first CLAS Student Leadership Board. The board is tasked with fostering a student community in CLAS, providing advice to the College on student interests, and interfacing with CLAS alumni and prospective students.

UNDERGRADUATE RECEIVES AETNA WRITING AWARD

7th semester chemistry undergraduate Mackenzie Poskus has been selected as the winner of the Aetna Writing Program’s Scientific Writing Award. Mackenzie’s paper focused on peptide properties and had been her writing assignment for CHEM 3170W.

GRADUATE STUDENTS

LSAMP BRIDGE TO THE DOCTORATE PROGRAM

Incoming graduate student Karla Arias was awarded the LSAMP Bridge to the Doctorate Program Fellowship.

NEXTGENCT FELLOWSHIP

Incoming graduate student Matthew Guberman-Pfeffer was awarded the NextGenCT fellowship by the Graduate School.
UNDERGRADUATE AWARDS

AMERICAN CHEMICAL SOCIETY AWARD
DANIEL CROCKER

AMERICAN INSTITUTE OF CHEMISTS AWARD
DHRUV JANI

ACS DIVISION OF ANALYTICAL CHEMISTRY AWARD
EMMA GATLEY

ACS DIVISION OF INORGANIC CHEMISTRY AWARD
ELAINE KARL

ACS DIVISION OF ORGANIC CHEMISTRY AWARD
FAITH CRITTENDEN

CATHARINE DESTEFANO ROSSI MEMORIAL SCHOLARSHIP
HANNAH TRIPP

CRC PRESS CHEMISTRY ACHIEVEMENT AWARD
JARED FURTADO

DR. VICTOR RIZZA SCHOLARSHIP FUND
CONTINUING SCHOLARS:
OMAR ALLAM
JOHNNA D’AMBRUOSO
HAMSAN GANAPATHI
ANTON GUDZ

GRADUATING SCHOLARS:
FAITH CRITTENDEN
THOMAS JOHNSON

GLENN IRANI M.D. AWARD
OMAR ALLAM

HACH CHEMISTRY TEACHER SCHOLARSHIP
REBECCA HOFFMAN

ROLAND WARD THESIS AWARD
KELLYN PATROS

WILLIAM R. GRANQUIST, JR. MEMORIAL SCHOLARSHIP
THERESA HART
MACKENZIE POSKUS

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 WASALATHANTHRI

WARING AWARD
MARK DABEN LIBARDO

INTERNSHIPS

MARY JOAN CASTILLO (YAO GROUP) participated in a 6-month co-op program at GlaxoSmithKline to work with the Mass Spectrometry team in the Biopharmaceutical R&D Bioanalytical Sciences.

CHRISTOPHER KELLY (LEADBEATER GROUP) has been awarded a CLAS Graduate Fellowship. This will provide a semester of support for the academic year 2014-2015. Christopher will use the fellowship to continue to pursue his research in the areas of organofluorine chemistry, and novel C-H bond-activation processes mediated by oxoammonium salts.

ROBIN CYWAR (LEADBEATER GROUP) has been accepted into the U.S. Department of Energy Science Undergraduate Laboratory Internship (SULI) program. She will spend the Spring 2015 semester working at the U.S. National Renewable Energy Lab in Golden, CO.

CHRISTIAN MALAPIT (HOWELL GROUP) has been awarded a research fellowship at Boehringer Ingelheim Pharmaceuticals during the 2013—2014 academic year, while KENDRICKS LAO (HOWELL GROUP) has been awarded a fellowship for the following academic year.

DEGREE RECIPIENTS

BACHELOR OF SCIENCE
BLAISE ARDEN
SYED ALI
PETER BARELLA
PLUKSHI BHATT
KEVIN BOYD
PAULINA CABANERO
CASEY CAMIRE
FAITH CRITTENDEN
DANIEL CROCKER
MATTHEW GOFSTEIN
ELIZABETH GUERRERA
DHRUV JANI
ERICA JESSEN
THOMAS JOHNSON
ELAINE KARL
JOHN LANTZANTE
NICOLE LUZI
JACQUELYN MANTENFEL
BRITTANY MANTHA
LANNA NAWA
MEGHAN NEGUS
JENNA NELSON
DANIEL NEVILLE
ALEX NGUYEN
EBUNOBLUWA OJESUNLE
KELLYN PATROS
DAMIANO RINALDI
SARAH SNYDER
CHIRAG TALATI
DAN TAMKUN
JINGAYA TAO
SIMON TRAN
ANNE YOON
JOSEPH ZITO

MASTER OF SCIENCE
VIDYA BOYANAPALLI
KADDY CAMARA
CHUXIN CHEN
NADEESHANI JAYATHILAKE
ANDREW MEGUERDICHIAN
PATRICK PLUMMER
JING ZHANG

DOCTORATE OF PHILOSOPHY
RAJAT DAS
INOKA DESHAPRIYA
PRAVAKANT DESHMUKH
HOMER GENUINO
SUSAN GICHUKI
CELINA GWIZDALA
LALITH SAMANKUMARA
JILLIAN WORLINSKY
YASHAN ZHANG
ALUMNI OF THE YEAR AWARDEE

Charles Zezza, Ph.D. ’87 has been named the Chemistry Department’s 2013 Alumni of the Year Awardee. Dr. Zezza, who obtained his Ph.D. with Professor Michael Smith, returned to the department to deliver a seminar entitled, “A Chemistry Retrospective.” In his seminar and in meetings with the department, Dr. Zezza touched upon many of the positions he has held in R&D as well as in management.

Dr. Zezza started his career as a research chemist focusing on surface chemistry and polymerizations at Millipore and then at American Cyanamid. He later transitioned to a Research Manager position at Rhône-Poulenc in 1993 in the Coatings and Construction Materials Business Unit, and was then appointed Business Manager for the Construction Materials group in 1997. Dr. Zezza relocated to Indiana in 2000 and joined Eli Lilly & Co., working in the International Regulatory Affairs team supporting global regulatory registrations of new products. He returned to New Jersey in 2005 to Bristol-Myers Squibb in a similar international regulatory role. In 2006, he joined Janssen Pharmaceutical R&D (a unit of Johnson & Johnson) as Director of U.S. Regulatory Affairs in infectious disease. In 2012, he was appointed Global Regulatory Leader in the HIV-1 disease area.

Dr. Zezza is also the owner of two U.S. patents and several international patents for research work completed at American Cyanamid and Rhône-Poulenc.

ALUMNI UPDATES

Archie S. Golden, B.A. ’53, M.D., M.P.H. recently retired as Associate Professor of Pediatrics and International Health at Johns Hopkins University and Director of Pediatrics at the Johns Hopkins Bayview Medical Center.

Thomas A. Marks, B.A. ’62, M.S. ’67 (Ph.D. SUNY at Buffalo, ’73) has written a novel, entitled STRAYS (more details: www.thomasamarks.com). Motivation to write this novel is the result of experiences and observations during a 40-year professional association with the role that chemicals and drugs play in the incidences of cancer and/or birth defects.

Christopher W. Allen, B.A. ’64 currently holds the position of Research Active Emeritus Professor of Chemistry at the University of Vermont. He has recently completed two terms as President of the Vermont Academy of Science and Engineering and continues to serve as the Senior Science Adviser for the Vermont Center for Emerging Technologies and on the Norwich University Board of Fellows.

Richard F. Dods, Ph.D. ’68 is the author of Understanding Diabetes: A Biochemical Perspective, published in March 2013 by Wiley & Sons. He is married to Linda D. Yucaas, ’69 Ph.D. (Clinical Psychology). After his graduation from UConn, he was a Postdoctoral Fellow at Sloan Kettering Institute for Cancer Research. Later he held Research Associate positions at New York University Medical Center and Northwestern University Medical Center. He was Adjunct Assistant Professor at the University of Illinois Medical School and Director of Clinical Chemistry at Louis A. Weiss Memorial Hospital in Chicago. He was instructor of Organic Chemistry and Biochemistry at the Illinois Mathematics and Science Academy for seventeen years.

Joseph Pompano, B.S. ’70, M.S., Ph.D. was honored by the American Chemical Society as the recipient of the Distinguished Service Award. Pompano has been an ACS member since 1994 and is a member in the Analytical Chemistry Division. He is a member of the Executive Committee of the Virginia Section and has served the section as treasurer, secretary, vice chair, chair-elect and chair. He was the general chair of the 2011 Southeast Regional Meeting of the American Chemical Society (SERMACS) and is involved with the Chemistry Olympiad. He is currently employed as a scientist and team leader at Arista Laboratories in the LC Group.

Lyn Zarcone, Ph.D. ’90 is President and CEO of Alpha Technologies in Akron, OH.

Heather (Gilletti) Frost, B.S. ’99 has taken a new position within Pfizer as a Clinical Platform Implementation Specialist, focusing on Lean Six Sigma and implementation of new IT platforms.

Rachel Ndonye, Ph.D. ’05 has been promoted to Professor at Montgomery College, Maryland.

Paul Sabila, Ph.D. ’06 has been awarded tenure as an Associate Professor at Gallaudet University.

Joseph Vincente, B.S. ’06, M.A. Chemistry Education, received the Department’s ACS Award upon graduation. Since then, he has been teaching 10th grade chemistry at East Side Community High School in New York City. He also served as Science Department Head for the past 6 years. He recently completed a 2nd master’s in Educational Leadership from New England College towards potential work in administration. At last year’s national ACS conference in New Orleans, he was awarded the ACS’s Award for Sustainability in Teaching.

Justin Fair, Ph.D. ’09 was awarded tenure at Indiana University of Pennsylvania.

Priya Pradhan, Ph.D. ’09 is teaching at the Hartford branch of UConn.

Nathan Hnatiuk, Ph.D. ’10 was promoted to Associate Professor of Chemistry at Cedarville University, Cenderville, OH.

Sadagopan Krishnan, Ph.D. ’10 joined Oklahoma State University in 2012 as an Assistant Professor.

Ashley Bartelson, Ph.D. ’11 has joined the faculty of the University of Saint Joseph in West Hartford.

Mary Khalili, Ph.D. ’11 has started working part-time as a research associate at Yale School of Medicine (Therapeutic Radiology department) on an EPR project on new techniques to measure the radiation dose in individuals using tooth enamel.

Rouholah Vahid Farrokhi, Ph.D. ’14 accepted a highly competitive postdoctoral position from Pfizer in Massachusetts. He started his new venture on human protein dynamics in mid-June of 2014.

WITH GRATITUDE

Glenn Irani, B.S. ’78 and The Irani Foundation have funded the Glenn Irani M.D. Award, which made its debut for the 2014-2015 academic year. This award will be given to a chemistry major entering their junior year who is planning to go to medical school after graduation. The award can be renewed for the student’s senior year provided outstanding academic progress is continued.

Dr. Lawrence E. Posner, M.A. Economics ’05 and Dr. Amy E. Newburger have made a generous pledge to the UConn Department of Chemistry toward faculty development, further supporting the department in its teaching and research goals.
INVESTING IN THE FUTURE

The Chemistry Department has experienced significant growth over the last decade. Currently we have ~140 graduate students and 215 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.

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.

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.

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.

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 CAN BE MAILED TO THE UCONN FOUNDATION:

The University of Connecticut
Foundation, Inc.
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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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