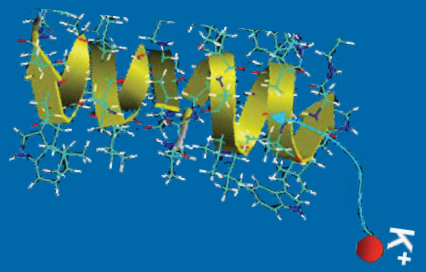
BLUE HEN CHEMIST



University of Delaware, Department of Chemistry and Biochemistry Annual Alumni Newsletter

NUMBER 41 AUGUST 2014 JOHN L. BURMEISTER, EDITOR

ON THE COVER

THREE Newly Renovated Organic Laboratories!

On The Cover

One of the three newly-renovated Organic Chemistry teaching laboratories (QDH 302) is shown. Work on the labs (QDH 112, 318, 320) started on May, 2013 and was completed in February of this year.

The refurbishment of the labs was a crucial step in the ongoing revision of the Organic Chemistry laboratory curricula. The additional fume hoods allow each student to conduct experiments individually while minimizing their exposure to chemical reagents. The transparent glass construction helps teaching assistants observe students while they work. The hoods are equipped with inert-gas lines, which can allow the students to work with air-sensitive compounds and learn advanced laboratory techniques. The hoods are also equipped with vacuum lines, which obviate the need for water aspirators and dramatically reduce the labs' water usage.

The lab design also allows for instrumentation modules to be swapped in and out according to the needs of the experiment. Carts are designed to house instruments such as gas chromatographs and infrared spectrometers as well as any necessary computer equipment. These carts can then be wheeled into docking areas that have been fitted with the necessary inert gas and electrical lines. The design expands the range of possible instrumentation the students can use while occupying a small footprint of lab space.

The labs also feature large flat screen monitors, wireless internet, and computer connectivitiy that will enable the use of multimedia demonstrations and tablet computing. It will also allow students to visualize and share data from their experiments.

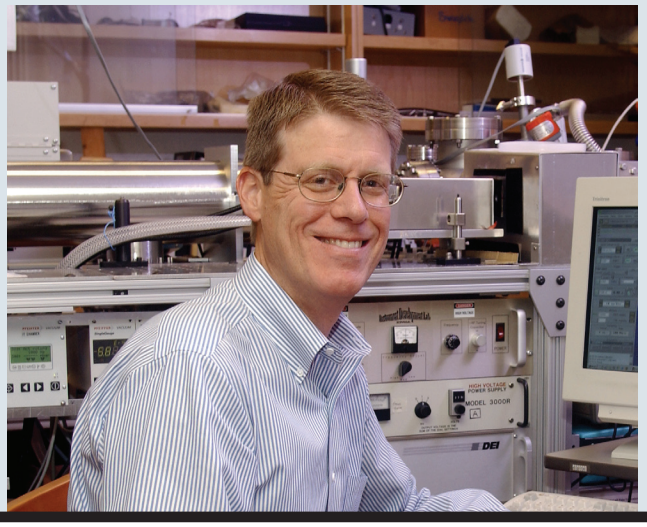
~ Geoffrey Sametz

Cover Photos by Carrie G. Bonnett

Richard Heck Celebrated his 83rd birthday this year.

Contents

From the Chair



Hello to everyone in our Chemistry and Biochemistry community! I am writing this message at a time when the Department has settled into its summer routine. To someone on the outside, the pace appears much slower – fewer classes underway and fewer students walking the halls between periods. But, don't let this appearance fool you. If you look closer, you will see a beehive of activity, just not in the formal classroom.

This summer we have almost 200 graduate and undergraduate students in our labs engaged in research. When not in the lab, you can find these students preparing oral and poster presentations, attending scientific conferences and participating in other professional development activities. Summer is a crucial time for them, since it is often the only time of year they are able to focus entirely on these endeavors.

Summer is also a time when big ideas are spawned. Faculty are able to think deeply about teaching and research, rather than simply responding to the crisis of the day as is often the case during the academic year. It is a time to revamp courses, develop new instructional models and chart multiyear pathways for research. Whether summer or the academic year, vibrancy is the norm in our Department.

This past year was marked by stability, and I have only a few hellos and goodbyes to report. **Meredith Wesolowski** left us after the Spring 2014 semester to move to the Boston area. In her place, **Kimberly Graves** will join our faculty in August 2014 to teach introductory chemistry. Kimberly received her Ph.D. in Chemistry this spring from Princeton University, performing research in organometallic chemistry. While at Princeton, she was also a Senior Graduate Fellow in the McGraw Center for Teaching and Learning, where she developed a strong pedagogical skill set. **Mark Baillie** and **Jackie Fajardo**, who joined our faculty a year ago to meet instructional needs of the new Interdisciplinary Science and Engineering Laboratory, saw their positions upgraded this year from temporary to continuing. **Bruce Hietbrink** (Ph.D., UCLA) will serve next year as a temporary faculty member to help meet our instructional needs in organic chemistry. We are sad to announce that **Derrick Allen**, our master machinist, is leaving us, but he won't be far away – just across The Green in the Department of Physics and Astronomy. We are equally sad to announce that **Beily Street** decided to retire. Beily served, with distinction, as a Senior Laboratory Technician in our Undergraduate Lab Services group for 21 years. Finally, we just learned that **Dave Murray**, our Facilities Manager, will be leaving us for a new position in the College of Engineering. Dave has shepherded our Department through many physical challenges over the years, and we wish to thank him for his dedicated service. While this is a loss for us, it is an outstanding opportunity for Dave to face new challenges and responsibilities. We wish him great success in his new position.

Kimberly Graves


Bruce Hietbrink


Derrick Allen

Our faculty continue to garner awards and accolades for their work. It was a banner year for **Joel Rosenthal**, who received a Sloan Research Fellowship, a National Science Foundation (NSF) Career Award, and an award from the Camille and Henry Dreyfus Foundation Postdoctoral Program in Environmental Chemistry to support his research in renewable energy and molecular energy conversion. **Joel**'s development of a bismuth electrocatalyst to efficiently and selectively reduce CO2 to CO was highlighted in the May 19, 2014 issue of **Chemical and Engineering News**. Other recent NSF Career Awardees in the last 3 years include **Sharon Rozovsky**, **Don Watson** and **Mary Watson**. **Catherine Leimkuhler Grimes** was named a Pew Scholar in the Biomedical Sciences by The Pew Charitable Trusts. Catherine's research uses carbohydrate synthesis, biochemistry, molecular biology and bacterial engineering to investigate activation of the human innate immune system.

Charlie Riordan and **Hal White** were elected fellows of the American Association for the Advancement of Science (AAAS) – **Charlie** "for distinguished contributions to bioinorganic chemistry, particularly to the mechanistic chemistry of nickel-containing enzymes" and **Hal** "for contributions to the development of problem-based learning in undergraduate science instruction and dissemination of active-learning pedagogy". **Charlie** also received the American Chemical Society Delaware Section Award. **Hal** received the Education Award from the American Society for Biochemistry and Molecular Biology (ASBMB) and Delaware Professor of the Year from the Council for the Advancement and Support of Education (CASE) at the Carneige Foundation for the Advancement of Teaching.

Tatyana Polenova's publication on an NMR study of a key stage in HIV-1 maturation toward an infectious

Dave Murray

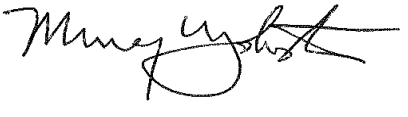
Roberta Colman

viron was highlighted as a Spotlight on Recent Publications of the Journal of the American Chemical Society. **Murray Johnston**'s research in atmospheric aerosol chemistry was highlighted in the "Sensing Change" exhibit at the Chemical Heritage Foundation in Philadelphia. The studies of **Don Watson** and **Zhihao Zhuang** were highlighted in UDaily on the awarding of substantial new funding for their research. You may recall that **Don Watson** was acknowledged in last year's **Blue Hen Chemist** for receiving a Cottrell Scholar Award. **Sandeep Patel** gave an inspiring lecture at the annual Nobel Symposium sponsored by the College of Arts and Sciences, which placed in context the 2013 Chemistry Award for advances in computational chemistry.

Karl Booksh received the Excellence in Service Award from the College of Arts and Sciences for his effort to "help minority students and those with disabilities find their way in the fields of science, technology, engineering and math". **Dana Chatellier** received a university-wide Excellence in Teaching Award for his outstanding instruction in non-majors introductory courses. Professor Emeritus **Roberta Colman** received an honorary doctoral degree at the University of Delaware's 165th Commencement Ceremony for her pioneering research and devotion to the assistance of women and minority scientists. **Roberta** is a former recipient of awards from the American Chemical Society, the American Society for Biochemistry and Molecular Biology, and the Francis Alison Award, UD's highest competitive faculty honor. It was great to have her back on campus.

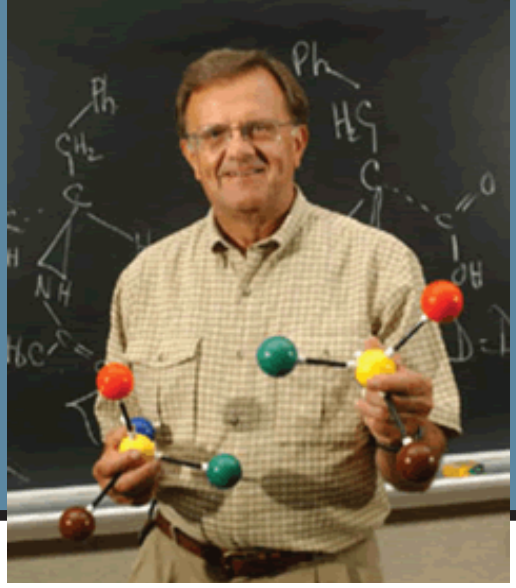
I would like to close by returning to the concept of year-round vibrancy. No matter what the time of year, our students and faculty are on-the-go. The fruits of their labors are evident in the many awards and accolades highlighted above and elsewhere in the **Blue Hen Chemist**. Donations from our alumni and friends are a crucial part of making this happen. To those of you who have provided support in the past, I would like to express a resounding "Thank You!" on behalf of our students and faculty. Looking forward, I encourage all in our community to partner with us so that we can continue to provide the highest quality environment for teaching and research.

Sincerely,



Murray Johnston,
Professor and Chair

From the Associate Chair:
Strain Points



The University has announced, with justifiable pride, that this year's freshman class will be the largest in its history (ca. 4280 students). To put this number in its proper context, it is almost as large as the **total** undergraduate enrollment at the University of Delaware (4400), when I arrived in 1964! The class of 2018 was constructed from an applicant pool of over 26,000 students.

The growth in the size of the CHEM/BIOC faculty, while substantial, has not quite kept pace. Whereas we numbered 13 in 1964, we now have an effective total of 40 including 33 tenure-track faculty engaged in both teaching and research, plus 7 others (5 Continuing Non-Tenure Track, 1 Education Specialist, 1 Temporary) dedicated primarily to instruction.

Our CHEM/BIOC infrastructure has also grown, albeit not proportionately. Brown Laboratory has been yoked, first, to Quaesita Drake Hall, and more recently, to the Lammot DuPont Laboratory. This past year, a significant portion of our large CHEM-103/104 course was moved to the teaching wing of the new Interdisciplinary Science and Engineering Laboratory. (See **Blue Hen Chemist** #40 for a description of the integrated CHEM-103/BISC-207//CHEM-104/BISC-208 course.)

By 1971, the University's total undergraduate enrollment had shot up to 9000. The enrollment in our undergraduate CHEM courses stood at 2131 in 71F. The total University undergraduate enrollment almost doubled in the interim (17,080 in 13F), and, correspondingly, the UG CHEM course enrollment increased by 91% (4066 in 13F).

Even more impactful is the surge in CHEM course enrollment in recent years, fueled by the campaign to increase the number of STEM majors. For example, the 71F and 06F enrollments (647 and 797 respectively) in our large CHEM-103 General Chemistry course (science and engineering majors, exclusive of CHEM, BIOC, and CHEG) were not all that different. By 13F, the CHEM-103 enrollment had exploded to 1320!

Newly Renovated Organic Laboratory

The crowding that ensued in our CHEM-103 labs in Drake Hall was dramatically relieved this past year, as noted earlier, by the opening of the ISE Laboratory. This enabled us to move 458 of the 1320 CHEM-103 students into the integrated CHEM-103/BISC-207 version of the course, whose laboratory sections were taught in the ISE Lab.

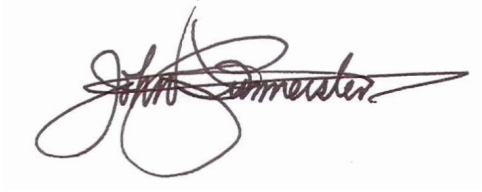
However, freshmen have a pronounced tendency to become sophomores, and the traffic jam has shifted to our organic chemistry courses, CHEM-321/322 and CHEM-331/332/333/334. The former

(our so-called pre-med organic chemistry course) had an enrollment of 218 in 71F; this coming fall that number will top out at 500! While, as noted inside the front cover of BHC#41, the three organic labs have been renovated, at considerable expense, to the state-of-the-art level, they are still **three** in number: QDH 112 for CHEM-321/322, QDH 318 for CHEM-333/334 (Organic Chemistry Laboratory for CHEM, BIOC and CHEG majors), and QDH 320 for CHEM-215 (Elementary Organic Chemistry Laboratory). Consequently, in addition to using all available time slots MTuWThF, we will be forced to schedule three CHEM-321 lab sections on Saturdays this fall, plus three more on Sundays! I very much doubt that many, if any, of our alumni ever faced taking an organic lab on the weekend. While not as large, on an absolute basis, the growth in CHEM-331 enrollment, due mainly to the swelling of the CHEG rolls, has been even more dramatic (37 in 71F vs. 158 in 14F).

The enrollment expansion in two additional courses speaks volumes. Whereas CHEM-105 General Chemistry (for nursing majors) enrolled only 31 students in 71F, that number had grown to 132 in 13F. The CHEM-220 Quantitative Analysis enrollment in 71F was a paltry 11. In 13F, it was a staggering 185 (it is now a required course for CHEG majors).

Clearly, having too many students is preferable to having too few. While the latter makes it more difficult to pay the bills, the former makes it more difficult to optimize pedagogy. To meet this challenge, we have succeeded in securing the necessary instructional support to institute formal discussion section meetings in both CHEM-321 and CHEM-331/333. Maintaining the integrity and excellence that has characterized our program for decades is our highest priority.

All the best,



Alumni Distinguished Professor &
Associate Chair

Photos by Carrie G. Bonnett

Greetings from the Director of Graduate Studies:

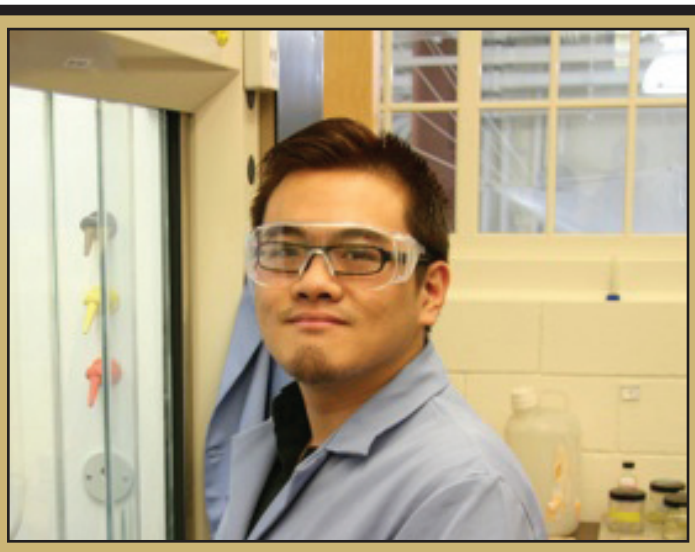
Our graduate program had yet another tremendous year in terms of awards and recognitions gathered by our students. I am very proud to describe them all, and I do hope I did not miss any.

I would like to begin with several high University-level recognitions. First, a Ph.D. student, who will begin his studies in the Fall'14, **Mr. Javon Rabb-Lynch**, was awarded the highly competitive **University Scholars Fellowship** for his first year of studies. Second, **Mr. Jun Liu**, who is currently a 4th year graduate student in the laboratory of **Prof. Sharon Rozovsky** and **Ms. Amber Gietter**, who is a 4th year graduate student in the laboratory of **Prof. Donald Watson** were awarded **University Graduate Fellowships**. The fellowships will fund, in part, their studies in the upcoming academic year. Third, **Mr. Yiben Wang**, who is currently a 3rd year graduate student in the laboratory of **Prof. Catherine Grimes** received another important recognition—the **Graduate Student Excellence in Teaching Award**. The $1500 award (one of only two University-wide) honors the best teaching assistants, who help guide their students and facilitate their learning. Well done Javon, Jun, Amber, and Yiben!

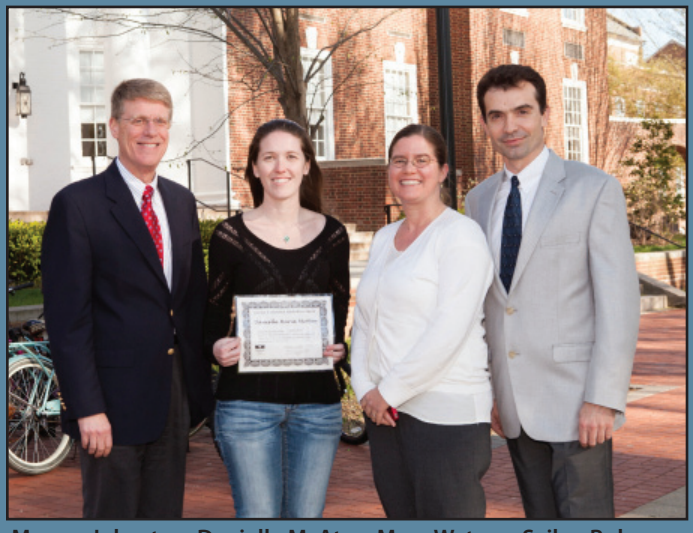
At the Departmental level, I am delighted to announce the winner of the most coveted honor for graduate students in our Department, the **Glenn S. Skinner Award**. It has a cash value of $2500 and is presented every year to the "best" student in the Department, who is deemed by a committee of faculty from each Division to have contributed the most in all three areas—scholarship, teaching, and service. The award is named in honor of **Prof. Glenn S. Skinner**, an active faculty member in the Chemistry Department from 1928 to 1958.

The 48th winner of the award is **Ms. Danielle Shacklady McAtee**. She received the check and the certificate at the Departmental **Heck Lecture** given by **Dr. Donald J. Darensbourg** (Texas A & M University) on April 23, 2014. Ms. McAtee received her master's degree in Chemistry from the University of Hawaii-Manoa in 2009 and began her pursuit of a Ph.D. in the research group of **Prof. Mary P. Watson** in the fall of the same year. Danielle has shone in the classroom with a nearly perfect GPA, and has stood out in all her graduate-level coursework. She has completed her cumulative exam requirement in only four tries, the mathematical minimum possible, and has delivered exceptional presentations at her first and second committee meetings. Danielle has also demonstrated she is a gifted teacher—she has received extremely strong teaching evaluations for CHEM-331 and CHEM-333 and has mentored a number of younger graduate students. She has also shown a high level of Departmental citizenship by maintaining the Organic Journal Club website and actively participating in the Graduate recruiting activities, as well as the recruitment of new faculty.

Mr. Jun Liu, whom I mentioned above as a recipient of a University honor, is on a roll this year—he was also awarded the **2014 Brennie E. Hackley, Jr. Award for Excellence in Research**. The award commemorates the career of Dr. Hackley, who in 1957 became UD's first African American doctoral graduate in chemistry. His 57-year career at the U.S. Army Medical Research Institute for Chemical Defense in the Edgewood Laboratories at the Aberdeen (MD) Proving Ground culminated in his becoming chief scientist there and earning him the federal government's Exceptional Civilian Service Medal. Mr. Liu's graduate work at the University of Delaware has been extremely productive with numerous publications in prestigious journals and accolades.



Yiben Wang



Murray Johnston, Danielle McAtee, Mary Watson, Svilen Bobev

Another student who needs to be acknowledged here is **Mr. Nian-Tzu (Albert) Suen**, who was the recipient of the 7th annual **Trofimenko Memorial Prize**. Albert is a graduate student working under my supervision, and I am extremely happy for him to be recognized for his creative synthetic inorganic work. The award was established in 2007 in honor of **Dr. Swiatoslav 'Jerry' Trofimenko**, a renowned chemist from DuPont, who is also known for the creation of the polypyrazolyl ("scorpionate") family of ligands. Following his retirement from industry, Dr. Trofimenko spent the final decade of his productive research career as a visiting scholar in the group of **Prof. Klaus Theopold**. Al received the $500 check and the certificate at the Inorganic Seminar on May 5, given by **Prof. Daniel Stack** (Stanford).

The Graduate Curriculum Committee received 12 excellent nominees for the Departmental **Elizabeth Dyer Excellence-in-Teaching Award**. This year, the competition for the 32nd annual **Excellence-in-Teaching Award** was incredible. At the end, the committee decided on five winners—**Jolie Blake**, **Sean Holmes**, **Hsuan Kung**, **Andrea Potocny**, and **Jessica Wallick**. I must say that all nominees were the winners this year, since the committee rarely sees such stellar student evaluations and supporting letters from faculty. The Dyer Award honors the memory of the late **Prof. Elizabeth Dyer**, a member of the chemistry and biochemistry faculty from 1933-1971. The award has been given since 1981 and recognizes graduate students who have been exemplary teaching assistants during the past academic year. The awards, which constitute a certificate and a modest cash prize, were presented to the winners at the **Mary Elizabeth Kramer Colloquium on Chemical Education** given by **Prof. William Donovan** (BS96) on October 7, 2013 (University of Akron).

A few words about each awardee:

Jolie Blake received her bachelor's degree from Franklin and Marshall College and works in the laboratory of **Prof. Lars Gundlach**. Jolie served as a TA in CHEM-105/102 General Chemistry during the fall of 2012 and the spring of 2013. "She was an outstanding TA" is a recurring statement in her student evaluations.

Sean Holmes received his bachelor's degree from the Washington and Jefferson College and is currently pursuing a Ph.D. under **Prof. Cecil Dybowski**. Sean served as a TA in CHEM-446 Physical Chemistry during the spring of 2013, and CHEM 115-Honors General Chemistry, during the fall of 2012. The nomination letter describes Sean's initiative to test "all six experiments and improve four of them by finding ambiguities that would confuse the students".

Hsuan (Sam) Kung received his master's degree from National Sun Yat-Sen University in Taiwan and is currently pursuing a Ph.D. with **Prof. Andrew Teplyakov**. Sam served as a TA in CHEM-445, Physical Chemistry, during the fall of 2012 and spring 2013. According to Sam's peers, "he engages the students by asking questions and assisting them whenever necessary, and has taken the lead role in the P-chem lab by mentoring the graduate students who have never performed the labs before".

Andrea Potocny received her bachelor's degree from the University of California in sunny San Diego, and I know, struggled a bit during her first winter in Delaware. Nonetheless, Andrea performed with distinction as a TA in CHEM-111/112, General Chemistry taught by **Prof. John Burmeister**. He summed it well—"great knowledge of the subject and good at imparting the knowledge to the students". She is currently pursuing a Ph.D. with **Prof. Joel Rosenthal**.

Jessica Wallick received her bachelor's degree from Gettysburg College and is currently pursuing a Ph.D. in the laboratory of **Prof. Charles G. Riordan**. Jessica was an outstanding TA in both CHEM-101 and CHEM 105 – General Chemistry, during last year. In his nominating letter, **Prof. James Wingrave** notes that "Jessica's contributions have had a significant impact in General Chemistry laboratory instruction at UD".

Jun Liu

John Burmeister, Svilen Bobev, Nian-Tzu Suen, Klaus Theopold, Daniel Stack

Last on my list, but not least, is the mention of the 41st edition of the **Joel L. Silver Award Symposium**, which took place on May 20, 2014. The namesake of the Silver Award, the late **Joel L. Silver,** was a doctoral student in the laboratory of **Prof. Burmeister**, who was tragically killed in a car accident in 1971, just a few months before earning his Ph.D. A fixture in the Department of Chemistry and Biochemistry since 1973, the Award Symposium commemorates Dr. Silver, and honors the hard work of all involved in graduate education in Chemistry and Biochemistry.

Thirteen students participated in the event and gave short research talks based on their graduate work, whose research presentations were judged by a panel of five outside expert jurors, composed of academic and industry representatives of each major research area. Analytical: **Dr. Katherine Bakeev**, B&W Tek, Inc.; biochemistry: **Dr. Susan Zondlo**, QPS Holdings, LLC; inorganic: **Dr. George Greco**, Goucher College; organic: **Dr. Eduard Casillas**, Villanova University; physical: **Dr. Ian Thorpe**, University of Maryland, Baltimore County.

We extend our sincere appreciation to the jurors, who had a very difficult task of selecting the winners—**John DiMeglio (Prof. Rosenthal)** won the 1st place award for his presentation titled "Elective Conversion of Carbon Dioxide to Fuel Precursors Using an Inexpensive Bismuth Based Electrocatalyst"; **Tian Qiu (Prof. Rosenthal)** won the 2nd place award for her presentation titled "Developing a Polypyrrole Ligand Scaffold with Cooperative Multielectron Redox Properties for Applications in Energy Conversion and Catalysis"; and **Sara Martin (Prof. D. Watson)** won the 3rd place award for her presentation titled "Development of the Silyl-Heck Reaction and Applications to the Synthesis of Vinyl Silyl Ethers". The other nine presenters, who also gave very interesting and informative talks were: **Jun Liu (Prof. Rozovsky), Srimoyee Dasgupta (Prof. M. P. Watson), Andrew Ehle (Prof. M. P. Watson), Zachary Voras (Prof. Beebe), Amber Gietter (Prof. D. Watson), Nian-Tzu Suen (Prof. Bobev), Joseph DePalma (Prof. Johnston), Jessica Wallick (Prof. Riordan), Christina Forbes (Prof. Zondlo),** and **Natalee Smith (Prof. Fox)**.

In closing, I would like to recognize the hard work and dedication of the members of the Teaching Assistantship and Fellowship (TAF) committee—**Prof. Donald Watson, Prof. Lars Gundlach, Prof. John Newberg, Prof. Zhihao Zhuang,** and **Prof. Joel Rosenthal**—who together with me spent much time and energy selecting the incoming class of graduate students. We are slated to welcome 36 new Ph.D. students in the Fall, and the preparations for their arrival are already well-underway. Here, I must also acknowledge the invaluable help the committee received from the graduate-recruiting coordinator **Ms. Carrie Bonnett** and from our seasoned Assistant to the Chair, **Ms. Susan Cheadle**, who contributed to our very successful graduate recruiting weekend, and our great recruiting season overall.

I am looking forward to another spectacular year by our graduate students and to sharing their amazing accomplishments with you for BHC#42!

With best regards,

Svilen Bobev

Associate Professor of Chemistry
Director of Graduate Studies and Assistant Chair

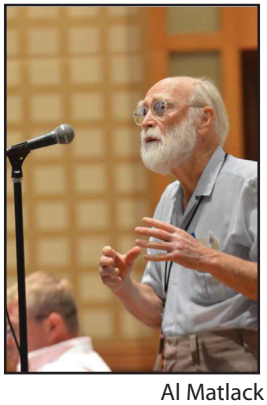
Back Row: Katherine Bakeev, Eduard Casillas, George Greco, Susan Zondlo. Front Row: Tian Qiu, John DiMeglio, Sara Martin.

Back Row: William Donovan, Geoff Kramer.
Middle Row: Svilen Bobev, John Burmeister, Murray Johnston.
Front Row: Andrea Potocny, Jolie Blake, Sean Holmes, Jessica Wallick, Hsuan Kung

Remembering...

This past academic year was a difficult one for our extended CHEM/BIOC family. In addition to the significant number of deaths noted in other sections of **BHC #41**, **five** former colleagues died in 2013-14. In chronological order:

Dr. Albert S. Matlack died at his home in Mill Creek on 11/4/13, at the age of 90. He served as an adjunct faculty member in our Department, following his retirement from the Hercules Research Center, from the fall of 1996 through the 2013 spring semester. During that time, he taught a cycle of three courses which took advantage of his deep and broad expertise: CHEM-667 Industrial Chemistry, CHEM-680 Introductory Polymer Science, and CHEM-681 Green Chemistry, which he created. He taught these courses gratis during most of this period.



Al Matlack

Al received his B.S. from the University of Virginia in 1944. He was drafted into the Army immediately following his graduation, and was posted to the two main military sites devoted to the secret atomic weapons program – first at Oak Ridge, TN, then at Los Alamos, NM. He did his graduate work at the University of Minnesota, receiving his Ph.D. in 1950. For the next 43 years, he worked at the Hercules Research Center, where, for a time, he was a colleague of the 2010 Nobel Laureate in Chemistry, **Dr. Richard F. Heck** (FAC 71-89). His research output was prodigious, earning him over 130 patents by the time he retired in 1993.

However, he was best known as an "environmentalist's environmentalist." He was a pioneer of "green chemistry," and published one of the first books on the subject, "Introduction to Green Chemistry," in 2001. A second edition was published in 2010. At the time of his death, he had just completed "Problem-Based Learning in Green Chemistry" co-authored with Andrew P. Dicks of the University of Toronto.

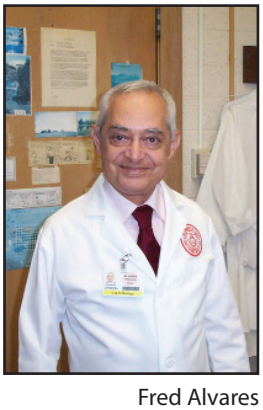
Al didn't only "talk the talk," he "walked the walk" – quite literally, commuting on foot between Mill Creek and the Hercules Research Center, and the U of D collecting "useful material" enroute. By actual count, according to his sons Kent and Glenn, he had accumulated 408 gloves by the time he died!

His appetite for knowledge was both insatiable and omnivorous. He never failed to ask one or more probing questions (usually the latter) at every seminar he attended in our Department (an average of three every week during the academic year). Indeed, he was profiled in an ACS Central Science Newscript Blog with the title "The Guy with the Questions at the National Organic Symposium."

He truly was one-of-a-kind, and will be deeply missed. (See full obituary in **C&E News**, 1/13/14, p. 43.)

Editor's Note: Thanks to Kent and Glenn Matlack for "filling in the blanks" in the foregoing.

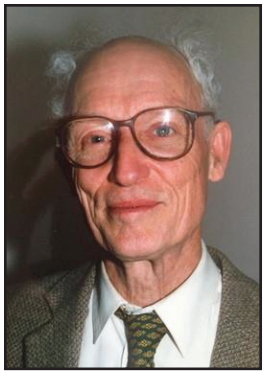
Dr. Frederick L. Alvares, Assistant Professor of Chemistry, passed away on November 20, 2013 (his birthday) in San Antonio, TX, at age 78, after a long battle with cancer. Fred taught biochemistry in our Department for one year (1986-87), after which he moved to St. Mary's University in San Antonio, where he spent the rest of his career. According to his Department Chair, he consistently received the best student teaching evaluations in the entire department. He was tenured in 1995, and was promoted to Full Professor in 2002.



Fred Alvares

Fred Received his B.A. from St. Xavier's College in 1957 and then went on to earn both his M.S. and Ph.D. degrees from the University of North Dakota in 1966 and 1973, respectively. He had the distinction of being the only person your Editor has ever met from the Portuguese Colony of Goa, off the coast of India. He was also the male equivalent of **Prof. Betty Dyer** (FAC 33-71), as far as his "niceness" rating was concerned. Indeed, to the day he died, he ordered magnificent National Geographic Calendars every year for **Prof. Colin Thorpe** and yours truly.

Dr. Wallace H. McCurdy, Jr. Associate Professor of Chemistry Emeritus, also died on November 20, 2014 in Newark, at the age of 87, of pancreatic cancer. He was a faculty member in our Department from 1959-1992.



Wally McCurdy

Wally was a fascinating blend of paradoxes. As an analytical chemist, he stressed the high importance of precision and accuracy, yet his office was a disaster area. He shared a passionate concern for the environment with Al Matlack, albeit in different ways. His home was solar powered, and he had almost completed the construction of an electric car, using an old Toyota Tercel chassis. Where Al walked, Wally rode, via (by his count) some 27 used bicycles. He logged ca. 264,000 miles on a Dodge Dart. He was an ardent supporter of the effort to restore the American chestnut tree. While Al was devoted to serving the Delaware Nature Society, Wally was equally devoted to the Delaware Academy of Sciences. He was President and founding board member of the Newark Day Nursery.

He was generous to a fault – so generous, in fact, that his giving to philanthropic causes triggered almost yearly audits by the IRS. He gave the "Qually Wally" Award to his top CHEM-120 student every year, and endowed the senior Award that bears his name – the **Wallace H. McCurdy, Jr. Undergraduate Award in Analytical Chemistry**. Yet, he eschewed the use of credit cards and electric clothes dryers. He loved sailing, and was an excellent instructor.

He raised procrastination to the level of art form. I can recall, for example, his asking me to distribute the first two pages of an exam to his class in BRL 101, while he ran off the remaining pages! When he took over the editorial reins of the **Blue Hen Chemist** from Betty Dyer, his first edition was six months late, prompting me to step in as Editor in 1996, after the next edition failed to appear in 3 years.

Wally graduated from Penn State College (not yet University) with a bachelor's degree in chemistry in 1947. He obtained his M.S. and Ph.D. degrees in analytical chemistry in, respectively, 1948 and 1951, working with the legendary Prof. G. "Fats" Smith at the University of Illinois - Urbana/Champaign. He served as a faculty member at Princeton University prior to coming to the U of D.

He was, truly, an American original. Having known and worked with him for 50 years I, like the rest of his colleagues, will miss him greatly.

Cyd McClure

Dr. Cynthia (Cyd) McClure, Associate Professor of Chemistry, died on May 6, 2014, in Bozeman, MT, at age 61. Cyd died much too young, of complications due to advanced dementia. She taught organic chemistry and did research in natural product synthesis and organophosphorus chemistry in our Department from 1987 to 1994, when she headed west to Montana State University, seeking, among other things, greener pastures for her horse in Big Sky Country. She received an NSF Career Award in 1994.

Cyd was vivacious and full of life. Having earned her B.A. in Chemistry (1975) from the same school (Northwestern University) where I earned my doctorate, we bonded immediately. Having attended a National Conference on Chemical Education at Montana State in 1986, I could certainly understand its drawing power. Nonetheless, I, as well as her other colleagues, hated to see her go.

She attended the University of Wisconsin, Madison in two stages, earning her M.S. in 1977 and her Ph.D. in 1985. In between, she worked for the Upjohn Company from 1977-1981. She spent 1985-87 as a Post-doctoral Associate at Cambridge University.

Cyd last visited our Department in 2012. Some of her old spark was still evident, but so were the inroads already made by that terrible disease. RIP, Cyd – you will be fondly remembered.

Ed Schweizer

Dr. Edward E. Schweizer, Professor Emeritus of Chemistry, died on May 18, 2014, in Newark, at age 86, of acute myeloid leukemia. Ed was a member of the CHEM/BIOC faculty from 1961 to 1994. He developed a world-class reputation for his research efforts (over 90 publications) in the area of organophosphorus chemistry, specializing in the chemistry of phosphonium ylids. He taught our so-called "pre-med" CHEM-321/322 Organic Chemistry course for many years and, with (the late) **Prof. Milt Stetson** in BISC, was regarded as the gatekeeper for U of D pre-med aspirants throughout his tenure.

To say that Ed was a man of strong opinions would be an understatement. Quoting from his obituary, which he wrote: "Schweizer was a member of the University of Delaware Faculty Senate since its inception until he retired. He attempted to legislate, unsuccessfully, that the fraternities be required to re-institute having housemothers and to lower their excessive drinking. These proposals distressed the fraternity members so much that one of them painted Schweizer's likeness blowing away a fraternity member on the Chrysler water tower. He was known to be a gadfly in the University Faculty Senate who questioned many actions by the University Administration."

I knew him as a man of high principles, who set high, unyielding standards for his students. My research group's studies on the coordination chemistry of phosphonium and arsonium ylids began with a paper co-authored with Ed, his doctoral student **Charlie Kopay** (PhD69), and my students **Ed Weleski** (MS71, PhD75) and (the late) **Joel Silver** (PhD72). He was a worthy opponent on the golf course.

He was also a man of diverse interests, which he pursued vigorously. He acted extensively, and served on the board of the Delaware Theater Company. He helped establish the University of Delaware Rowing Club, and was its first advisor.

His educational and experiential portfolios were equally diverse. Ed received his B.S. in Chemistry from North Dakota State College in 1951. He worked for a year as managing chemist at Argos, his father's paint manufacturing company in Buenos Aires, Argentina. He then returned to North Dakota State College, where he earned his M.S. degree in 1953. His Ph.D. in Organic Chemistry was awarded by MIT in 1957. Two years of industrial research followed, with the Minnesota Mining & Manufacturing Company, in St. Paul, MN. After spending 18 months as a Post-doctoral Fellow at the University of Minnesota, he joined the faculty of Hofstra College in 1960.

Ed's and Wally's deaths have reduced the roll of my original dozen CHEM/BIOC colleagues in 1964 to three: **Bob Wood** (FAC 57-02), **Conrad Trumbore** (FAC 60-97), and **Don Dennis** (FAC 61-99). Time marches on!

Sayonara!

Since joining our CHEM/BIOC faculty as an Assistant Professor (CNTT) in 2010, **Prof. Meredith Wesolowski** has distinguished herself as a superb teacher in Honors CHEM-103/104 General Chemistry. Her passion for teaching was palpable, and her degree of commitment was noteworthy. "Dr. Wes" was idolized by her students.

Then, she became trapped between a rock and a hard place. First, her husband Steve became one of the "lucky" ones, when AstraZeneca decided to terminate its research program at their Wilmington location – he was moved to AZ's Cambridge, MA site. Then, their daughter, Mara Catherine, was born on 5/10/13. Meredith, consequently, decided to put her teaching career on hold, and has moved to Boston to unite the family.

She received her B.S. in Biochemistry from the University of Arizona in 1996, her M.A. in Science Education from the University of Georgia in 2000, and her Ed.D. in Education Leadership with a Technology Concentration, from the University of Delaware in 2008. Prior to joining our Department, Meredith taught Chemistry and Biology at Cochise College, Douglas, AZ (on-site, 2000-03, on-line, 2003-08). She has taught an on-line biology course for UD's Department of Biological Sciences since 2006, and will continue to do so while living in Boston. Other teaching stints included Cecil College, Northeast, MD (2003-04), Cloud County Community College, Concordia, KS (on-line, 2007-08), Wilmington (DE) University (2008-09) and Gloucester County College, Sewell, NJ (2009-10). Her awards include a 2010-2011 National Academies Fellowship in Life Sciences Education, a 2008 Exemplary Use of Technology in Teaching Award from UD's IT-User Services, and a 2008 Innovative Teaching Award in Distance Education from UD's Division of Professional and Continuing Studies.

She will be greatly missed by both her students and colleagues, and we wish her nothing but the best.

Major Gifts to the Department

The CHEM/BIOC Department was the beneficiary of several major gifts during the past year, which will enable us to significantly enhance our academic program. In alphabetical order:

Ethel I. Anderson

A bequest from the late **Ethel I. Anderson** (47MA, 50PhD) will be divided among the endowments supporting the **Glenn Skinner Memorial Prize**, the **Elizabeth Dyer Undergraduate Awards in Chemistry and Biochemistry**, and the **Quaesita Drake Scholarships**.

(the late) **Prof. Glenn S. Skinner** (FAC 28-58) served as Dr. Anderson's M.S. thesis adviser; her doctoral mentor was (the late) **Prof. William A. Mosher** (FAC 45-72; Chair, 45-69). She bears the unique distinction of being the first woman to receive a doctoral degree from the University of Delaware **in any field**. Her undergraduate degree was earned at Ursinus College.

A gift from **Scott** (BS96) and **Krista** (BS96) **Barber** will be used to underwrite the cost of new equipment for our recently renovated organic teaching laboratories in Drake Hall (QDH 112, 318, and 320). Scott is the Operations Manager for Facebook in Cedar Park, TX.

A bequest from the late **Edward L. Grinnan** (MS50, PhD52) will be used to create an endowment that will support graduate summer fellowships in the area of biochemistry. Dr. Grinnan did his undergraduate study at the Pennsylvania Military College. His masters and doctoral research in our Department was mentored by (the late) **Prof. William A. Mosher**. He spent his entire professional career (1952-85) as a Research Biochemist with Eli Lilly, in Indianapolis, IN. He died on June 25, 2012.

Edward Grinnan

Your Editor's encounter with **David M. Heitzer** (BS[CHEG]77) was limited to only one semester of CHEM-111 General Chemistry, but it planted a seed which has now burst into full flower. Dave is in the process of creating an endowment that will support undergraduate CHEM/BIOC summer research fellowships similar to the program created earlier in our Department by Dave Plastino (BS78). Like **Dave Plastino**, Dave Heitzer later earned an MBA (University of Texas, Austin, (1983)). He currently leads EDF Trading North America, in Houston, TX. EDF Trading provides comprehensive power, natural gas, and renewable contract origination service to large industrial clients in North America, in an exclusive long-term arrangement.

Ms. Sarah M. Klivan's connection to our Department was even more indirect. She was the aunt of (the late) **Joel L. Silver** (PhD72), whose death in an automobile accident in May, 1971 spurred the creation of the annual **Joel L. Silver Memorial Symposium**. Ms. Klivan's bequest will also be used to support graduate summer research fellowships in Joel's name.

Alumni Honors

Our Department was well represented in the annual distribution of University and College alumni honors:

Anne M. Gaffney (PhD 82), our 2013 CHEM/BIOC Graduation Convocation Speaker, is the latest graduate of our program to be enshrined on the University's Wall of Fame. The induction program was held in the Gore Recital Hall in the Roselle Center for the Arts on 6/7/14.

Anne received her B.S. in chemistry and mathematics from Mount Holyoke College in 1976. Her doctoral research was mentored by (the late) **Prof. Harold Kwart** (FAC 51-83). She is now Invista's R&D Director for Specialty Materials, in Newark. Anne has accumulated more than 200 patents during her three decades in the chemical industry. She has received numerous awards, including the ACS Industrial Chemistry Award (2013), a Service and Leadership Award through the World Congress on Oxidation Catalysis (2013), the ACS Distinguished Service Award in Petroleum Chemistry (2010), and the ACS Green Chemistry Award (2009).

Previous CHEM/BIOC inductees:

2010: **Arthur J. Coury, Ph.D.** (BS62)
2009: **David A. Plastino** (BS78)
2003: **Anthony A. Kossiakoff** (PhD72)
2002: **Debra Hess Norris** (BA77)
1999: (the late) **Paul J. Andrisani** (BS68)
1994: **Jane Margaret O'Brien** (PhD81)
Reed E. Pyeritz, Ph.D., M.D. (BS68)
1985: (the late) **Daniel Nathans, Ph.D.** (BS50)
1984: (the late) **Nina Matheny Roscher, Ph.D.** (BS60)

Lawrence M. Principé, Ph.D. (BS83), our 2008 CHEM/BIOC Graduation Convocation Speaker, received the College of Arts and Sciences' Outstanding Alumni Achievement Award at a ceremony held at the same location on 5/20/14.

Larry earned doctoral degrees in both organic chemistry (Indiana University, 1988) and the history of science (Johns Hopkins University, 1996). He is currently the Drew Professor of the Humanities and the Director of the Charles S. Singleton Center for the Study of Premodern Europe, both at Johns Hopkins. He is a world class expert on the history of science and, in particular, alchemy. He has written 5 books on the subject, and, in 2004, was chosen to be the first recipient of the Francis Bacon Medal for his significant contributions to the history of science. He was named the Maryland Professor of the Year in 1988, by the Carnegie Foundation.

Previous awardees:

2013: **Michele Hackley Johnson, M.D.** (BA75)
2012: **Carolyn Cochrane Kent** (MS66)

Larry M. Principe

Svilen Bobev, Anne Gaffney, Murray Johnston, Hal White

Additional Faculty/Staff Activities

(the late) **Wayne P. Anderson, Ph.D.** (FAC 68-75) has been remembered at Bloomsburg (PA) University in two very different ways: "beloved for his zany neckties" and in a memorial fund that has enabled dozens of Bloomsburg undergraduates to travel to conferences to present their research.

Prof. Mark Baillie has been a veritable PR machine, promoting our new integrated CHEM-103/BIOC-207//CHEM-104/BISC-208 course, taught for the first time this past year in the University's new Interdisciplinary Science and Engineering (ISE) Laboratory. The course was profiled, and he was liberally quoted, in a **C&E News** feature article (1/20/14, pp.40-41). The course's use of five preceptors was highlighted which, in turn, produced a favorable review in **Chemjobber** (chemjobber.blogspot.com). On 2/20/14, Mark took the lead in squiring Sen. Chris Coons' tour of the ISE Lab (delawareonline.com). Finally, his CHEM-104/BISC-208 class, 330 strong, participated in a well-received two-week laboratory module marking Earth Day that included field lab experience to investigate water quality on the College of Agriculture and Natural Resources farm property on South Campus (udel.edu/udaily).

Profs. Karl Booksh and **Sharon Rozovsky** are co-PI's for an NSF-funded Research Experience for Undergraduates (REU) Program – The Science and Engineering Leadership Initiative (SELI). Motivated by the realization that people with disabilities are significantly underrepresented in STEM disciplines, SELI strives to position today's students with disabilities to become tomorrow's leaders in academia and industry.

Mark M. Chamberlain, Ph.D. died on 3/29/14 at the age of 82. Mark spent a sabbatical semester (1994) in your Editor's laboratory, on leave from Rowan University, where he served as President for 15 years (1969-84).

Educational Specialist Dana S. Chatellier (MA84) rode a rollercoaster of emotions this past year. **Michelle** (BA97), his wife of 22 years, passed away unexpectedly on 10/6/13, at the age of 56. Michelle spent her career as a pharmacy technician for Happy Harry's and, for the past 6 years, Rite Aid. She also served as a part-time laboratory TA in our Department for several years. Her late father, **Charles Scheib**, was also a graduate of our program. On 5/5/14, Dana received a well-deserved 2014 University Faculty Excellence-in-Teaching Award. That's an understatement, since a well-placed informant has revealed that he had been nominated for this award for almost all of the preceding 15 years!

Al (chemist) A. Denio, Ph.D. (FAC 78-79, 98-99) was this year's recipient of the ACS Delaware Section's Tillmans-Skolnick Award for his outstanding efforts to improve the public's perception of chemistry and his service to the Section. He is a member of the ACS National Senior Chemists Committee, and published an article on "DuPont, Carothers and Nylon" in the 12/13 edition of the **ACS Senior Chemistry Newsletter**.

Jennifer Durkin (Former STAFF) joined SURVICE Engineering last November as a technical writer. She has progressed rapidly to Programming Analyst, thence to Deputy Lead, and, finally, to their IT Department.

The circles of connectivity in the profession of chemistry have long fascinated your Editor. **Prof. Jacqueline Fajardo**'s Chemistry Department Chair at the University of Northern Colorado (her doctoral institution) is **Prof. Michael D. Mosher**. Michael's great uncle, (the late) **Prof. William A. Mosher** (FAC 45-72; Chair, 45-69) hired me in 1964!

Jean H. Futrell, Ph.D. (FAC 86-99; Chair, 86-96) has retired to the status of Battelle Fellow Emeritus at the Pacific Northwest National Laboratory, in Richland, WA. His distinguished career was described in an article by Richard Smith in the **Journal of the American Society for Mass Spectrometry** [(2014) DOI:10.1007/s13361-014-0829-8]. Included therein is a striking portrait of Jean, painted by his wife, **Anne K. Graham,** a former faculty member in the U of D's Department of Art.

Prof. Pamela Green, Crawford H. Greenewalt Chair in the Department of Plant and Soil Sciences, with a joint appointment in CHEM/BIOC, has been named one of the ca. 3,000 top scientists in the world, based on the recently launched Thomson Reuters Highly Cited Researchers list.

Prof. George Luther has been named a Fellow of the Geochemical Society.

Arnold L. Rheingold, Ph.D. (FAC 84-03), Professor of Chemistry at the University of California, San Diego, lost his wife, Jan, to the many complications of advanced dementia last October. Arnie never ceases to surprise your Editor! In addition to piloting his own plane, he has just become the owner of an avocado farm – 200 trees and 30 tons of fruit, atop a small mountain, about 45 minutes from his home in Carlsbad, CA. He urges the **BHC** readers to buy his fruit ("a nearly perfect food"), marketed as Margali Fruit, LLC. Arnie is an at-large member of the ACS Division of Inorganic Chemistry's Board of Directors.

Our new Provost, **Dr. Domenico Grasso**, has launched a new Strategic Planning Initiative for the University. Our Department and its alumni are well-represented thereon:

- **Prof. Charlie Riordan**, Vice-Provost for Research, will lead the effort, as the Chair of the Executive Committee. Committee members include:
- **Prof. Debra Hess Norris** (BA77) Henry Francis duPont Chair in Fine Arts and Chair of the Department of Art Conservation
- **Prof. Donald Sparks** (JOINT FAC), S. Hallock duPont Professor of Plant and Soil Sciences and Director of the Delaware Environmental Institute

One of the three working groups, Models for the New American Research University, will be co-chaired by **Prof. Kristi Kiick** (BS89), Deputy Dean of the College of Engineering.

Douglass F. Taber, Ph.D. (FAC 82-13) is the 2014-15 Chair of the Philadelphia Organic Chemists Club.

A one-day Symposium was held at the spring Dallas ACS Meeting in honor of **Prof. Klaus Theopold**'s 60th birthday.

After many years of service as the ASBMB/UAN's faculty adviser, **Prof. Hal White** has transferred the adviser's reins to **Profs. Catherine Grimes** and **Sharon Rozovsky**.

Visiting Faculty, 2013-2014

Mr. Huy (Mike) Dao (MS11), CHEM-103/104 General Chemistry (Dover Associate-in-Arts Program)

Dr. Bruce Hietbrink (Ph.D. UCLA), CHEM-321/322 Organic Chemistry

Dr. Karen L. Hoober (PhD99), CHEM-106 Elementary Bioorganic Chemistry, CHEM-214/216 Elementary Biochemistry

Dr. Paul Silver (PhD73), CHEM-101 General Chemistry

Dr. Michael Stemniski (McKean High School-retired), CHEM-102 General Chemistry, CHEM-103 (Summer College); CHEM-103/104 (Wilmington Associate-in-Arts Program), CHEM-213/215 Elementary Organic Chemistry

Post-Doctoral Researchers & Fellows, 2013-2014

Vidyadhar Daithankar (University of Delaware) [Rozovsky]

Ampofo Darko (University of Florida) [Fox]

Peter Eldridge (University of Southampton, England) [Gundlach]

Himal Ganguly (Bose Institute with University of Calcutta, India) [Zondlo]

Rupal Gupta (Carnegie Mellon University) [Polenova]

Guorui Li (Wuhan University, China) [Zhuang]

Yu Liu (University of Maryland, College Park) [Fox/Grimes]

Xingyu Lu (University of Lille, France) [Polenova]

Julien Makongo Mangan (Technical University of Dresden, Germany) [Bobev]

Jonnathan Medina Ramos (Virginia Commonwealth University) [Rosenthal]

Luis Mori Quiroz (Michigan State University) [D. Watson]

Caitlin Quinn (Columbia University) [Polenova]

Marion Schäfer (Universitat Stuttgart, Germany) [Bobev]

Sudipta Sinha (Indian Institute of Technology, India) [Patel]

Stanislav Stoyko (Ivan Franko Lviv State University, Ukraine) [Bobev]

Visiting Scholars, 2013-2014

Mohammad Bayat (Imam Khomeini International University, Iran) [Fox]

Qi Long (Nanjing Xiaozhuang University, China) [Scantlebury]

John Young (Gelest, Inc.) [Theopold]

ACS/SA Chapter Officers, 2014-2015

President: **Lauren Genova** (BS/CHEM/15)

Vice-President: **Caitlyn Sarno** (BS/CHEM/16)

Secretary: **Emily Wunsch** (BS/Exer.Sci/17)

Treasurer: **Brittney Petel** (BS/CHEM/15)

Webmaster: **Thomas Keane** (BS/CHEM/16)

HR Officer: **Angela Chang** (BS/CHEM/17)

Faculty Adviser: **Prof. Burnaby Munson**

Named Lectures 2013-2014

Our academic program has been greatly enriched by endowments supporting three named lectures:

The 7th **John C. Wriston, Jr.** (FAC 55-85) **Memorial Lecture** was presented on 9/16/13 by **Herbert Waite**, Professor of Molecular, Cellular and Developmental Biology at the University of California, Santa Barbara. Prof. Waite, who was a UD faculty member for 12 years, before moving to UCSB in 1998, discussed "In Search of a Scientific Foundation for Implementing Bio-adhesion."

Previous Wriston Lecturers:

2012: **Prof. Anthony Kossiakoff** (PhD73), University of Chicago

2011: **Prof. George Rose** (FAC 79-80), Johns Hopkins University

2010: **Prof. Philip Cole**, Johns Hopkins University

2009: **Prof. Gregory Petsko**, Brandeis University

2008: **Prof. Lila Gierasch** (FAC 79-87), University of Massachusetts, Amherst

2007: **Prof . Susan Taylor**, University of California, San Diego

The 2nd **Mary Elizabeth Kramer** (FAC86-12) **Memorial Lecture** on "STEM Educational Research with Non-STEM Students" was presented on 10/7/13 by **William J. Donovan** (BS96), Associate Professor of Chemistry at the University of Akron.

Previous Kramer Lecturers:

2012: **Mr. Dana Chatellier** (MA84) and **Prof. Meredith Wesolowski** (FAC 10-14), University of Delaware.

The triad was completed on 4/23/14, when the 11th **Richard F. Heck** (FAC 71-89) **Lecture** was presented by **Donald Darensbourg**, Professor of Chemistry at Texas A&M University. Prof. Darensbourg's topic was "Current Status of CO2/ Epoxide Coupling Processes: Copolymer vs. Cyclic Carbonate Production."

The continuing generous support of the Heck Lectureship by Amgen, Inc. is gratefully acknowledged, as are the efforts of **Karl B. Hansen, Ph.D.** (BS93), Amgen's Scientific Director for Chemical Process R&D, who again made this possible.

Editor's Note: Prof. Darensbourg was one of my Gen Chem TA's during the year (1963-64) that I served as an Instructor at the University of Illinois-Urbana/Champaign.

Previous Heck Lecturers:

2013: **Prof. Gregory Fu**, CalTech

2012: **Prof. Eric Jacobsen**, Harvard University

2011: **Prof. Ei-ichi Negishi**, Purdue University

2010: **Prof. John Hartwig**, University of Illinois – Urbana/Champaign

2009: **Prof. Barry Trost**, Stanford University

2008: **Prof. Larry Overman**, University of California, Irvine

2007: **Prof. Robert Bergman**, University of California, Berkeley

2006: **Prof. Robert Grubbs**, Cal Tech

2005: **Prof. Stephen Buchwald**, MIT

2004: **Prof. Richard Heck**, University of Delaware

Colloquia & Symposia 2013-2014

The special, all-Department lectures which we call colloquia, both internal and external, added interest to our year-round seminar program:

Date	Speaker/Affiliation	Topic
9/25/13	Prof. Corey Stephenson Univ. of Michigan	"Visible Light-Enabled Catalysis" (2nd Annual Student-Invited Lecture)
11/22/13	Prof. Burnaby Munson University of Delaware	"The History of Mass Spectrometry"
3/7/14	Prof. Joseph Fox University of Delaware	"Fast Bioorthogonal Chemistry: Discovery, Development, and Applications"
3/26/14	Prof. Gary Molander Univ. of Pennsylvania	"A Novel Mechanistic Paradigm for Cross-Coupling"
4/21/14	Prof. Melanie Cooper Michigan State University	"CLUE (Chemistry, Life, the Universe, and Everything)"
4/28/14	Prof. John Markley Univ. of Wisconsin-Madison	"Role of a Metamorphic Protein in Iron-Sulfur Cluster Biosynthesis"
5/2/14	Prof. Cecil Dybowski University of Delaware	"Theoretical & Practical Applications of Solid State NMR of Heavy Nuclei"

The 34th East Coast Ion Chemistry Conference (it would have been the 35th except that the conference was canceled in 2012 because of Hurricane Sandy) was held on Saturday, October 26. Talks were given by speakers from the University of Delaware, the University of the Sciences, Drexel University, Georgetown University, DuPont, DuPont Performance Coatings, and Mass Tech. Topics included mechanisms and energetics of aerosol particles formation, matrix effects, MALDI-TOF, polymer and organohalogen analyses, and sample introduction techniques.

The Delaware Membrane Protein Symposium, organized by **Profs. Sharon Rozovsky** and **Edward Lyman**, was held in Clayton Hall on 5/12/14. The keynote address on "Membrane Structure at the 10 Nanometer Scale: A WALP Helix Alters the Structure of a 4-Lipid Component Bilayer" was presented by **Prof. Gerald Feigenson**, of Cornell University.

19th CHEM/BIOC Graduation Convocation, May 31, 2014

THE Class of 2014 was greeted with a pluperfect spring day on May 31st. Continuing the tradition of its predecessors, the featured speaker at our 19th CHEM/BIOC Graduation Convocation in the Pearson Hall Auditorium was one of our most accomplished alumni: **Dr. Karl B. Hansen** (BS93), the Scientific Director for Small Molecule Process and Product Development for Amgen, Inc. in Cambridge, MA.

Karl carried out his undergraduate research in the laboratory of (the late) **Prof. Cynthia (Cyd) McClure** (FAC 87-94). His doctoral research at Harvard University (PhD98) was mentored by Prof. Eric Jacobsen. After spending six years with the Merck Process Research Group in Rahway, NJ, he assumed his present position with Amgen in 2006.

Karl's remarks were personal, humorous, and above all, memorable. He concluded by administering the following "Oath of the Chemist" to the graduates, which brought down the house:

"Do you affirm that you will explain, defend and promote the chemical sciences, including its sub-disciplines of physical, analytical, inorganic, organic and biochemistry and understand that they are fundamentally one and the same?

Do you affirm that you will bear true faith to and allegiance to all of chemistry's tenets and principles including atoms and bonds; ionic, covalent and hydrogen; the laws of thermodynamics and the theories of quantum mechanics and use them to explain natural phenomena at every opportunity that presents itself to you so help you, Avogadro?

Then by the powers vested in me by my holding a doctorate of philosophy in the chemical sciences and as an advanced practitioner of the art, I do hereby declare you all to be chemists, entitling you to all the privileges, benefits and responsibilities this title conveys."

All graduates in attendance received individual recognition, including ten award recipients. One of these, **Sean Herron**, was recognized at the University's Commencement ceremonies for being one of the ten students who graduated with a perfect 4.000 GPA.

Karl B. Hansen

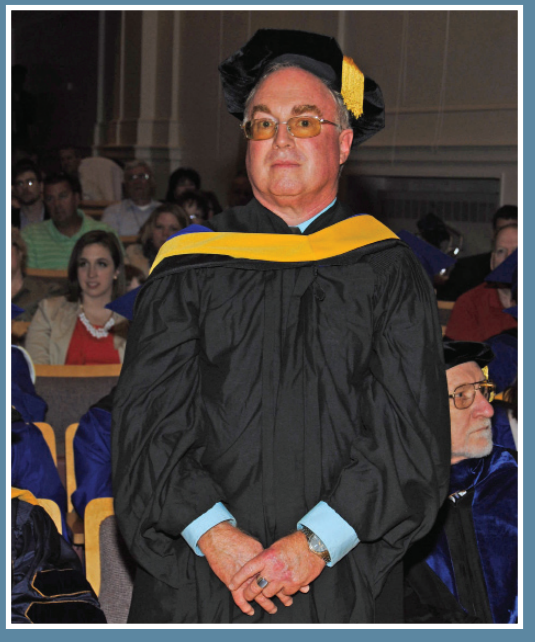
Murray Johnston, Karl B. Hansen, Svilen Bobev

Zachary March, Jake Lefler, Luke Oostdyk, Alison Wing, Alyssa Hull

The Oath of the Chemist

Dyer Awardees - Matt Urban, Doug Kenny

Burnaby Munson, Marshalling



Dana Chatellier

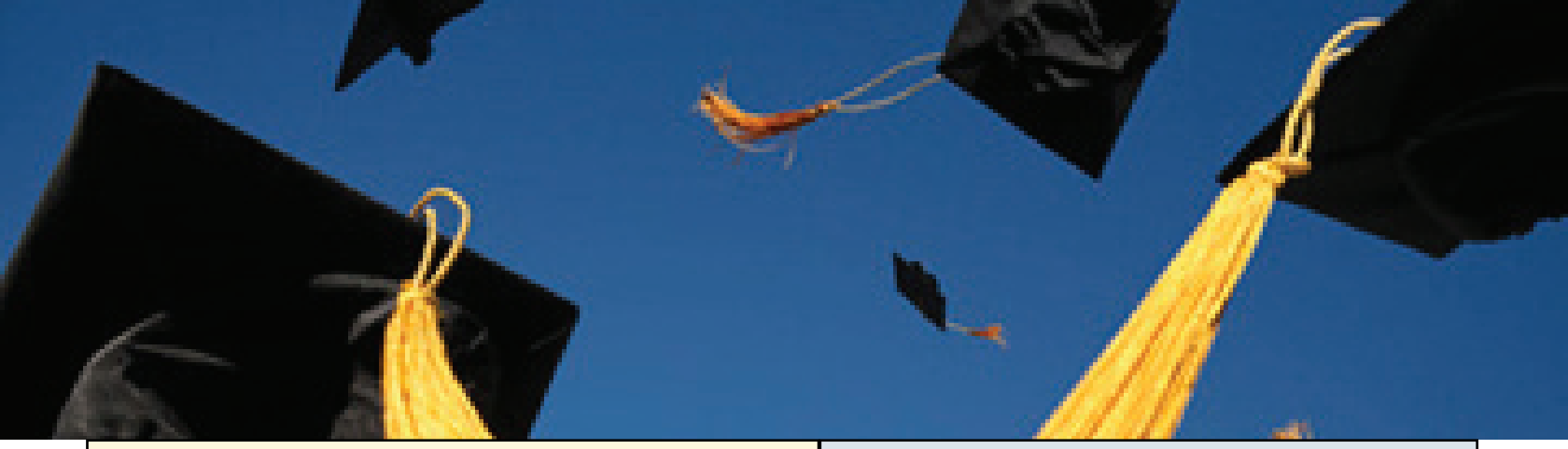
The subsequent reception in Brown Laboratory for the graduates, their families, and friends continued another, even longer tradition. Once again, **Prof. Burnaby Munson** provided Segway rides, which are always a hit with those who are willing to try them.

Variability and uncertainty continued to be the hallmarks for the class of 2014:

	2014	2013	2012	2011	2010	2009
Graduate School	12	18	10	12	7	20
Medical School	1	4	1	7	3	4
Dental School	-	1	-	2	2	2
Pharmacy School	2	-	-	1	1	4
Law School	1	-	1	1	2	2
Nursing School	-	2	1	-	-	2
Industry	8	6	7	3	8	2
Government	-	-	1	1	1	2
Teaching	2	-	1	1	1	4
Other	1	2	2	1	3	3
Undetermined	34	18	29	26	22	9
TOTAL	61	51	53	55	50	54

In like manner, the mix of baccalaureate degrees keeps changing:

	2014	2013	2012	2011	2010	2009
BA/CHEM	7	5	12	18	11	11
BA/XCE	1	2	1	1	-	-
BS/CHEM	30	21	17	21	18	13
BS/BIOC	23	23	23	15	21	30



2014 B.A. Chemistry Graduates

Morgan L. Ayars

Katie E. Czerniak

Gregory M. Darone (XCE)

Michelle D. Gibbons

Bree A. Howard

Anna N. Kurmas

Sandra D. McNally

Han Zheng

2014 B.S. Chemistry Graduates

Assem Abd El Khalik
Andrew J. Blemings
Charles R. Brunner
Steven S. Choi
Yuexing Cui
Andrew S. Dover[a]
Michael S. Estephan
Nicholas R. Favate
Yuanliu He
Sean C. Herron[a]
Timothy E. Hoffman
Ashraful Hoq
Alyssa M. Hull[b]
Douglas J. Kenny[b]
Francis J. Kinney
Andrew G. Korovich
John A. Lora
Zachary M. March[a]
Colleen E. McClatchy[a]
Jennifer P. McCord[a]
Melissa G. Morris
Christopher M. Mueller
Awet H. Negusse
Peter J. Schonert
Alexey N. Shiklomanov[b]
Kayleigh J. Stephens
Jun Tsuda
Lea C. Vest
Anna V. Walter
Fangyu Wan

[a] *Honors Degree* [b] *Honors Degree with Distinction*

2014 B.S. Biochemistry Graduates

Daniel M. Bailin

Mehir A. Desai

Abdur S. Elmani

Angela M. Ferelli

Donald C. Ford

Sangwon Jeon

Matthew J. Lefler[a]

Michael C. LePere

Joseph E. Massaglia[a]

Josephine F. Mathews

Kaitlyn E. McCrystal

Luke T. Oostdyk[a]

Evan S. Pozzanghera

Sergio Rodriguez Corona

Kathleen N. Seip

Alyssa M. Southard

Alex R. Squittiere

Ramya S. Sridharan[b]

Ian C. Tedeschi

Matthew J. Urban[a]

Xuanzhao Wang

Allison M. Wing[b]

Michael R. Wyatt

[a] *Honors Degree* [b] *Honors Degree with Distinction*

Graduate or Professional School Bound

Daniel Bailin, University of North Carolina – Chapel Hill (Dramatic Arts),
Yuexing Cui, Northwestern University (Ph.D. in Chemistry),
Sean Herron, Harvard University (Law School)
Alyssa Hull, Duke University (Ph.D. in Chemistry)
Sangwon Jeon, Thomas Jefferson University (Pharmacy School)
Douglas Kenny, Harvard University (Ph.D. in Chemical Biology)
Andrew Korovich, Virginia Polytechnic Institute (Ph.D. in Chemistry)
Jennifer McCord, Virginia Polytechnic Institute (Ph.D. in Chemistry),
Matthew (Jake) Lefler, George Washington University (Ph.D. in Chemistry),
Zachary March, University of Pennsylvania (Ph.D. in Biochemistry and Molecular Biophysics)
Joseph Massaglia, Lake Erie College (Osteopathic Medicine),
Luke Oostdyk, University of Virginia (Ph.D. in Biochemistry)
Kathleen Seip, Thomas Jefferson University (Pharmacy School),
Alexey Shiklomanov, Boston University (Ph.D. in Geography and Environment)
Anna Walter, Purdue University (Ph.D. in Materials Engineering)
Allison Wing, Yale University (Ph.D. in Biological and Biomedical Sciences)

Graduate School Placements, 1994-2014

Adelphi	1	Florida State	2	North Carolina-Chapel Hill	11	Tennessee	1
Alaska-Fairbanks	1	George Mason	1	North Carolina-Greensboro	1	Texas	4
Arcadia	1	Georgetown	2	North Carolina State	1	Texas A&M	3
Boston College	3	George Washington	3	Northeastern	1	Thomas Jefferson	5
Boston University	3	Georgia	1	Northwestern	2	Toledo	1
Brigham Young	1	Georgia Tech	2	Notre Dame	1	Toronto	1
Brandeis	1	Gordon Conwell	1	Ohio State	4	Towson	1
Cabrini	1	Harvard	5	Oregon	1	Tufts	2
California-Berkeley	2	Hawaii	2	Pace	4	Vanderbilt	1
California-Irvine	5	Illinois-Chicago	2	Penn	12	Villanova	1
California-Los Angeles	1	Illinois-Urbana	7	Penn State	9	Virginia	4
California-San Diego	3	Imperial College, London	1	Pittsburgh	3	VPI & SU	3
California-San Francisco	3	Indiana	4	Princeton	8	Wake Forest	2
California-Santa Barbara	1	Johns Hopkins	5	Purdue	3	Washington (St Louis)	1
Cal Tech	5	Kansas	1	Rhode Island	1	West Chester	1
Carnegie Mellon	1	Lehigh	2	Rochester	3	Wisconsin	1
Case Western	4	Maryland-Baltimore	1	Rutgers	7	Yale	4
Chicago	1	Maryland-Baltimore Co.	4	St. John's	1	Yeshiva	1
Clemson	1	Maryland-College Park	6	Scripps	2		
Colorado State	1	Massachusetts	3	Selznick School for Film Preservation	1		
Columbia	5	Michigan	5				
Connecticut	3	Michigan State	1	Shenandoah	1		
Cornell	9	Minnesota-Twin Cities	2	South	1		
CUNY	2	MIT	7	Southern Mississippi	1		
Delaware	21	Montana State	1	Stevenson	1		
Drexel	1	Montclair State	1	SUNY-Buffalo	2		
Duke	3	New Castle (England)	1	SUNY-Stony Brook	1		
Emory	1	New Hampshire	2	Syracuse	1		
Florida International	1	NYU	1	Temple	3		

Headed for Industry, Etc.

Andrew Blemings, Colonial Metals (Synthetic Chemist)

Gregory Darone, Charter School of Wilmington (Chemistry Teacher)

Donald Ford, Christiana Care (Exercise Technician)

Colleen McClatchy, Agilent Technologies (Sales Division)

Christopher Mueller, DuPont (Research Assistant)

Alex Squittiere, Siemens Healthcare Diagnostics (Biochemist)

Kayleigh Stephens, Agilent Technologies (Sales Division)

Jun Tsuda, Gaba Company, Japan (English Teacher),

Matthew Urban, White Optics (Laboratory Technician)

2014 M.A./M.S. Graduates

Parikshit V. Gokhale (MS)
Mentor: Zhihao Zhuang
Baccalaureate Degree, School: M.S., B.S., University of Pune, India

Tiffany A. Gutowski (MA)
Baccalaureate Degree, School: B.S., Hood College

Jennifer M. Kurek (MS)
Mentor: Colin Thorpe
Baccalaureate Degree, School: B.S., Stevenson University

Steven A. Rossi (MS)
Mentor: Donald Watson
Baccalaureate Degree, School: B.S., University of Sciences in Philadelphia

Ye-Geun Song (MS)
Mentor: Mary Watson
Baccalaureate Degree, School: B.S., Indiana University

2014 Graduate Student Placements

NAME	PREVIOUS DEGREE(S), COLLEGE(S)	DISSERTATION CHAIR	DISSERTATION TITLE	Placement
Sha Bai	B.S., University of Science & Technology, China	Douglass Taber	Development of New Synthetic Methodology and Approach to Total Synthesis of (-)- Morphine	Harvard Medical School (Post-Doctoral Associate)
Bryan R. Bzdek	B.S., Bucknell University	Murray Johnston	Chemical Mechanisms Governing Atmospheric New Particle Formation	University of Bristol, UK (Post-doctoral Associate)
Liyuan Chen	B.S., Bejing University of Chemical Technology	Steven Brown	Geospatial Pattern Recognition: Geographical Pattern Knowledge Discovered from Surface Water Data	Financial Analyst in CA
Joseph W. DePalma	B.S., Sacred Heart University	Murray Johnston	Quantum Chemical Studies of Atmospherically Relevant Molecular Clusters and Their Role in Particle Formation	Yale University (Post-doctoral Associate with Dr. Mark Johnson)
Ming Dong	B.S., Hebei University of Technology, China	Brian Bahnson	Arrhenius Break Point Effect on Structure, Dynamics and Function of Enzymes	University of Delaware (Post-doctoral Associate with Dr. David Colby, CHEG)
Shawn A. Gannon	B.S., Penn State University	Colin Thorpe	Cysteine Rich Biomaterials and a New Ratiometric Method of Protein Redox Potential Measurements	DuPont (Research Scientist)
Michael C. Giano	B.S., Bloomsburg University	Joel Schneider	Exploiting Hydrogels for Medical and Biological Applications	Johnson & Johnson (Research Scientist)
Yingxin Huang	B.E., Dalian University of Technology, China	Charles Riordan	Small Molecule Activation by Nickel Complexes: Selenium, White Phosphorus, Nitrogen Oxides, and Dioxygen	National Measurement Institute, Melbourne, Australia (Research Scientist)
Benjamin A. Israel	B.S., Mansfield University	Colin Thorpe	Studies of QSOX, a Medically Important Flavoenzyme: Mechanistic Insights, Searching for Inhibitors, and a Potential New Diagnostic Assay	Siemens Healthcare Diagnostics (Senior Biochemist)
Laurel L. Kegel	B.S., Millersille University	Karl Booksh	Characterization of Surface Plasmon Resonance (SPR) Active Nanohole Array Sensing Platforms: Development and Application of Novel Instrumentation and Methodology	University of Arizona (Post-doctoral Associate with Prof. Jean Pemberton (BS 77))
Jennifer Kurek	B.S., Stevenson University	Colin Thorpe		Goucher College (Chemistry Stockroom Manager & Chemical Hygiene Officer)
Eric A. Levenson	B.S., George Mason University	Kristi Kiick (MSEG)	Investigation of Toll-Like Receptor 9 Ligand Recognition and Function Via Multivalent Deoxyribonucleic Acid-Polymer Conjugates	National Institutes of Health (Post-doctoral Fellow with Dr. Kim Green)
Jia-Ming Lin	B.S., Chi-Nan University, Taiwan M.S., National Sun Yat Sen University	Andrew Teplyakov	Molecular Level Understanding of Deposition Processes on Functionalized Silicon Surfaces	Taiwan Semiconductor Manufacturing Company (Research Scientist)
Yue Liu	B.S., Nankai University, China	Andrew Teplyakov	Application of Surface and Interface Reactions into Designing Novel Devices and Materials	L'Oreal (Senior Research Scientist)
Yushan Liu	B.S., Wuhan University, China	Steven Brown	Dealing with Missing Data: Imputation for Multivariate, Finite Mixture Data	Leco (Research Chemometrician)
Pavan K. Mantravadi	B.S., University of Madras, India M.S., Indian Institute of Technology, Madras	John Koh	New Tools for Controlling Nuclear Receptor Function	University of Pittsburgh (Post-doctoral Associate with Dr. Alex Deiters)
Timothy Miller	B.S., Siena College	Andrew Teplyakov	Fabrication and Characterization of Thin Films and Coatings	University of Illinois, Urbana/Champaign (Post-doctoral Associate)

2014 Graduate Student Placements
cont...

NAME	PREVIOUS DEGREE(S), COLLEGE(S)	DISSERTATION CHAIR	DISSERTATION TITLE	Placement
Shuching Ou	B.S., Tsinghua University, China	Sandeep Patel	Ion-Specificity: From Air-Water Interface to the Free Energetics of Hydrophobic Association	University of Texas (Post-doctoral Associate in Medical Branch)
Craig M. Paquette	B.S., Drexel University	Douglass Taber	Development of New Synthetic Methods and Progress Towards the Total Synthesis of (+)-Salvileucalin B	Aberdeen (MD) Proving Grounds (Research Scientist)
Stephanie A. Ramadan	B.S., Marian College of Fond du Lac	Colin Thorpe	Understanding the Flavoenzyme Human Augmenter of Liver Regeneration: Biochemical and Structural Perspectives	Weill Cornell Medical College, Qatar (Post-doctoral Associate in the Department of Physiology and Biophysics)
Steven A. Rossi	B.S., University of Sciences in Philadelphia	Donald Watson		Princeton Plasma Physics Laboratory (Reactive Metals Chemist)
Aparna Sapra	B.S., University of Delhi, India	Colin Thorpe	Designing Arsenic Based Inhibitors for Redox-Active Enzymes	University of Michigan (Post-doctoral Associate)
Heather R. Schmidt	B.S., Loyola College	Douglas Doren	Properties of Gallium Zinc Oxonitrides and Other Mixed Metal Oxinitride Solid Solution Photocatalysts	
Stephanie H. Scott	B.S., Davidson College	Brian Bahnson	Exploring the Catalytic Mechanisms and Physiological Function of Senescence Marker Protein 30 Via Crystallography, Enzyme Kinetics, and Isothermal Titration Calorimetry	(Padua Academy) High School Chemistry Teacher
Ramajeyam Selvaraj	B.S., University of Madras, India M.S., Indian Institute of Techology, Madras	Joseph Fox	Development of New Synthetic Methods for Carbometallation Chemistry and Development of Bioorthogonal Probes for Applications in Nuclear Medicine	Purdue University (Post-doctoral Associate with Dr. Christopher Uyeda)
Danielle M. Shackladyy-McAtee	B.S., State University of West Georgia M.S., University of Hawaii at Manoa	Mary Watson	Nickel-Catalyzed Reactions of Nontraditional Electrophiles to Set Stereogenic Centers	BASF, (Research Scientist)
Daniel J. Smith	B.S., Lebanon Valley College	Joel Schneider	Imparting Unique Function in Peptides and Peptide-Based Materials Using Non-Natural Amino Acids	University of Utah (Post-doctoral Associate in Bioengineering)
Ye-Geun Song	B.S., Indiana University	Mary Watson		University of Delaware (Research Scientist with Dr. Christopher Kloxin, MSEG)
Cem Sonmez	B.S., Istanbul Teknik Universitesi	Joel Schneider	Bacterial Expression of Self-Assembling Peptide Hydrogelators	National Cancer Institute (Post-doctoral Associate with Dr. Joel Schneider)
Fangyuan Tian	B.S., Jilin University, China	Andrew Teplyakov	Modification of Semiconductor Surfaces with Organic Molecules by Wet-Chemistry Approaches	
Gabriela de R. Uceda Cortez	B.S., Pontifical Catholic University of Peru	John Koh	Probing for the Effect of Thyroid Hormone Receptors in Different Cancer Phenotypes	
Si Yan	B.S., University of Science/ tec	Tatyana Polenova	Microtubule-Associated CAP-GLY Domain of Dynactin: Structure, Dynamics, Conformational Plasticity, and Interactions with Microtubules and Microtubule Plus-End Tracking Proteins by Magic Angle Spinning NMR Spectroscopy	Post-doctoral Associate in Boston

2013-2014 Undergraduate Awards

DEPARTMENT AWARDS	RECIPIENTS
American Chemical Society Award in Chemistry	**Benjamin M. Lefler** (BS/CHEM/15)
American Chemical Society Undergraduate Award in Analytical Chemistry	**Kenneth B. Weaver** (BS/CHEM/15)
American Chemical Society Undergraduate Award in Inorganic Chemistry	**Benjamin M. Lefler** (BS/CHEM/15)
American Chemical Society Undergraduate Award in Organic Chemistry	**Douglas J. Kenny** (BS/CHEM/14)
American Institute of Chemists Award in Chemistry	**Alyssa M. Hull** (BS/CHEM/14)
C. Frank Shaw III Undergraduate Inorganic Research Fellowship	**Benjamin M. Lefler** (BS/CHEM/15)
Carl A. von Frankenberg Undergraduate Award in Chemistry Education	**Gregory M. Darone** (BA/XCE/14)
Elizabeth Dyer Awards for Excellence in Chemistry and Biochemistry	**Douglas J. Kenny** (BS/CHEM/14) **Matthew J. Urban** (BS/BIOC/14)
Frank W. Collins Undergraduate Awards in Biochemistry	**Luke T. Oostdyk** (BS/BIOC/14) **Matthew J. Urban** (BS/BIOC/14)
Gene J. and Frances E. Schiavelli Undergraduate Research Fellowship	**Alyssa M. Hull** (BS/CHEM/14)
Hypercube Scholar Award	**Zachary M. March** (BS/CHEM/14)
James A. Moore Undergraduate Award in Organic Chemistry	**Douglas J. Kenny** (BS/CHEM/14)
Kevin Scott Beall Memorial Awards	**Alex Manders** (BS/CHEM/17) **Shelby A. Roseman** (BS/CHEM/17)
Merck Index Awards	**Matthew J. Lefler** (BS/BIOC/14) **Luke T. Oostdyk** (BS/BIOC/14)
Quaesita Drake Scholarships	**Lauren A. Genova** (BS/CHEM/15) **Katie G. Owings** (BS/CHEM/15) **Jennifer P. McCord** (BS/CHEM/14) **Allison M. Wing** (BS/BIOC/14)
Wallace H. Carothers Scholarships	**Thomas P. Keane** (BS/CHEM/16) **Nikifar D. Lazouski** (BS/CHEM/16)
Wallace H. McCurdy, Jr. Undergraduate Award in Analytical Chemistry	**Sean C. Herron** (BS/CHEM/14)

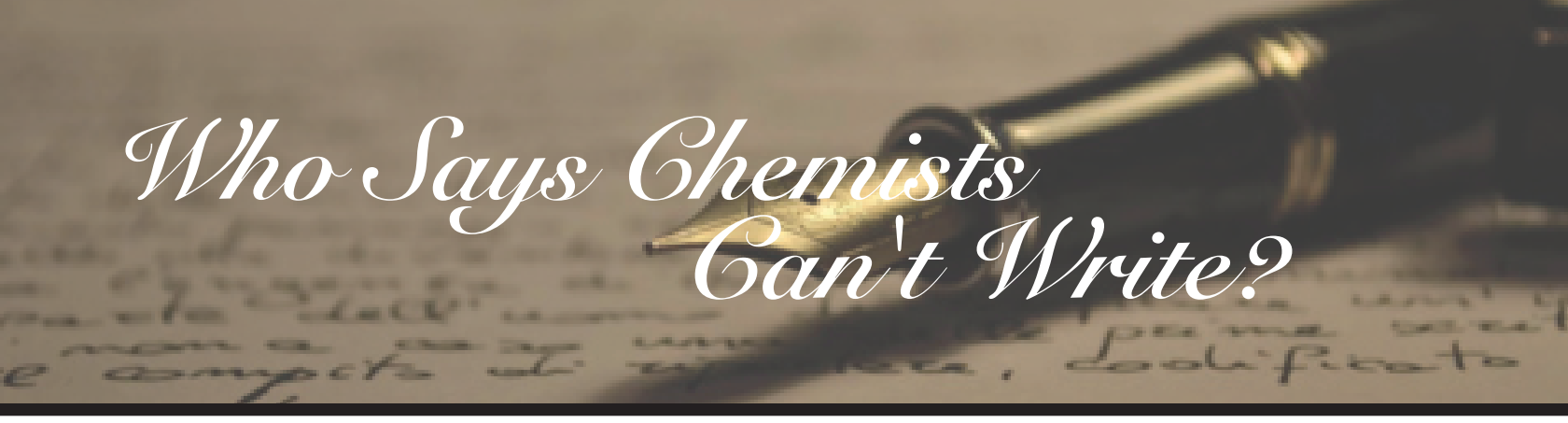
REGIONAL AWARDS	RECIPIENTS
All-Colonial Athletic Association Soccer First Team (Goalie)	**Borja Barbero** (BS/BIOC/15)
All-Colonial Athletic Association Soccer Academic Team	**Luke T. Oostdyk** (BS/BIOC/14)
78th Intercollegiate Student Chemists Convention, Albright College, Reading, PA, April 26, 2014	**Benjamin M. Lefler** (BS/CHEM/15) 2nd place, Inorganic Division
16th Undergraduate Research Symposium in the Chemical and Biochemical Sciences, University of Maryland, Baltimore County, October 26, 2013	**Yuexing Cui** (BS/CHEM/14) 1st place, Chemical Sciences Group C **Lauren A. Genova** (BS/CHEM/15) 1st place, Chemical Sciences Group T **Thomas P. Keane** (BS/CHEM/16) 1st place, Chemical Sciences Group B **Douglas J. Kenny** (BS/CHEM/14) 1st place Chemical Sciences Group D **Benjamin M. Lefler** (BS/CHEM/15) 1st place Chemical Sciences Group A

NATIONAL AWARDS	RECIPIENTS
American Chemical Society - Hach Scientific Foundation Scholarship Awards	**Gregory M. Darone** (BA/XCE/14) **Lauren A. Genova** (BA/XCE/15) **Laura S. Kennedy** (BA/XCE/15)
ASBMB Undergraduate Travel Awards to National Experimental Biology Meeting, San Diego, CA, April 26-30, 2014	**Lauren A. Genova** (BS/CHEM/15) **Matthew J. Urban** (BS/BIOC/14)
Ashland Scholar Award	**Brian H. Tran** (BS/CHEM/17)
Fulbright Scholar Award	**Alyssa M. Hull** (BS/CHEM/14)
Goldwater Scholar Award	**Benjamin M. Lefler** (BS/CHEM/15)

UNIVERSITY AWARDS	RECIPIENTS
American Association of University Professors Undergraduate Student Award	**Douglas J. Kenny** (BS/CHEM/14)
Edward H. Rosenberry Undergraduate Writing Award	**Douglas J. Kenny** (BS/CHEM/14)
Highest Grade Point Index, Class of 2014	**Sean C. Herron** (BS/CHEM/14)
Joseph Weber Undergraduate Research Award in Art Conservation	**Alyssa M. Hull** (BS/CHEM/14)
Phi Beta Kappa Herbert Ellis Newman Award	**Lukas Campolo** (BS/CHEM/15)

SUMMER RESEARCH AWARDS			
RECEIPIENT		**SOURCE OF SUPPORT**	**MENTOR**
Kelly Daniels	(BS/BIOC/16)	HHMI	Prof. Neal Zondlo
Katie Dillon	(BS/BIOC/16)	UG Research Program	Prof. Edward Lyman
Leena Doolabh	(BS/BIOC/15)	HHMI/Hoffman	Prof. Catherine Grimes
Tyler Heiss	(BS/BIOC/16)	HHMI	Prof. Catherine Grimes
Ryan Kirk	(BS/BIOC/15)	State of DE	Prof. Matthew Butchbach (BISC)
Tyler McCann	(BS/BIOC/16)	HHMI	Prof. Jia Song (BISC)
Thomas Rivas	(BS/BIOC/15)	INBRE	Prof. Brian Bahnson
Dominic Santoleri	(BS/BIOC/15)	Plastino Fellowship	Prof. Sharon Rozovsky
Angela Stegmuller	(BS/BIOC/15)	UG Research Program	Prof. Catherine Safran (BISC)
Jay Subramoney	(BS/BIOC/17)	Heitzer/CHEM S&E	Prof. Sharon Rozovsky
Lukas Campolo	(BS/CHEM/15)	State of DE	Prof. Joanna York (Marine Sci.)
Lauren Genova	(BS/CHEM/15)	HHMI	Prof. Catherine Grimes
Thomas Keane	(BS/CHEM/16)	HHMI	Prof. Joel Rosenthal
Ryan Kozlowski	(BS/CHEM/16)	Plastino Fellowship	Prof. Donald Watson
Benjamin Lefler	(BS/CHEM/15)	Plastino Fellowship	Prof. Joel Rosenthal
Christopher Monaghan	(BS/CHEM/16)	Plastino Fellowship	Prof. John Koh
Caitlyn Sarno	(BS/CHEM/16)	EpScor	Prof. George Luther (Marine Sci.)
Kenneth Weaver*	(BS/CHEM/15)	Plastino Fellowship	Prof. John Newberg
Sarah Yannarell	(BS/CHEM/15)	State of DE	Prof. Julia Maresca (CIEG)
Salil Ketkar	(BS/Environ.Sci/15)	Plastino Fellowship	Prof. Sharon Neal

*** DENIN Environmental Scholar (academic year)**



Who Says Chemists Can't Write?

The stereotypical view of scientists and engineers is, of course, that they are all about numbers and equations and tend to avoid writing. That is certainly not the case in **Prof. Hal White**'s classes!

In point of fact, **Douglas Kenny** is the **thirteenth** student in one of Prof. White's classes to be recognized in the annual **Edward H. Rosenberry Writing Award** competition. Doug's paper on "On the Origin of Life: The Search for LUCA" was written as an assignment in Prof. White's CHEM-667 Biochemical Evolution class, and received the second place award in this year's competition.

Doug, who hails from Sayville, NY, is a senior Honors BS/CHEM major who was chosen as a Goldwater Scholar last year. He carried out his Honors Degree-with-Distinction thesis research project in the laboratory of **Prof. Catherine Grimes**. This coming fall, he will enter the doctoral program in chemical biology at Harvard University.

Previous awardees:

2012: **Helen Schmidt** (BS/BIOC/13), CHEM-342 Introduction to Biochemistry [First Place]

2011: **Nicholas Marze** (BS/CHEG/11), CHEM-643 Intermediary Metabolism [Honorable Mention]

2007: **Richard Karpowicz** (BS/BIOC/00), CHEM-643 [Honorable Mention]

2007: **Gretchen Ritter** (BS/BIOC/08), CHEM-342 [Honorable Mention]

2005: **Amanda Peters** (BS/BIOC/05), CHEM-643 [Honorable Mention]

2003: **Todd Greco** (BS/BIOC/03), CHEM-647 Biochemical Evolution [Honorable Mention]

1996: **Laura Swanson** (BS/BIOC/97), CHEM-342 [Honorable Mention]

1995: **Michael Skinner,** CHEM-342 [Honorable Mention]

1993: **Sonja Kerby** (BA/FLLT/94), UNIV-495 [Honorable Mention]

1991: **Keith Robison** (BS/BISC/91), CHEM-647 [Honorable Mention]

1990: **Carla Scanzello** (BS/BIOC/91), CHEM-465 [Honorable Mention]

1990: **Kimberly Stinson**, CHEM-342 [First Place]

Alumni News

Fifty-Year ACS Members

Only two UD graduates appeared in the list published in **C&E News** (5/26/14, pp. 55-63): **Eugene J. Volker** (PhD70), retired in Shepherdstown, WV and **Walter J. Freeman** (PhD 72), retired in Loganville, GA.

30's

Historical Footnote, unearthed by **Dr. Al Denio** (FAC 78-79, 98-99): **Helen Everett Sweetman** (BS33) was the vice-president of her graduating class in what was then the UD Women's College. Here, verbatim, is her entry in the 1933 UD Women's College Yearbook:

HELEN EVERETT SWEETMAN

Arts and Science Wilmington, Delaware

Vice-President Class II, III; Treasurer Y. W. C. A. II; Treasurer Dramatic Board II; French Club I, II; Math Club III; Hockey III.

Sweetie would be more in her element as the moving spirit of a feminist league than as a member of a sheltered women's college. Woman's obligation to the race and its future, and the superiority of the male are red flags to this young modern. How her friends would chuckle if one day a husband and six children descended on her! With those brown eyes and cloudy black hair she'll have a time preventing at least a part of this from happening. She's a crack chemist; for that matter she has no trouble with anything she tackles. Her friends all envy her gift for concentration.

Sweetie can, however, abandon herself to the craziest fun ever conceived and excels in acting the three parts of a poignant melodrama entitled "Our Nell." Turbulent Russia would suit her, and Russia needs crack chemists. If the straws fall that way, we may see Sweetie striking out for Moscow.

The prophetic tone of the entry is obvious, while the influence of "Breaking Bad" had yet to be felt. "Sweetie" did not strike out for Moscow. Instead, she joined DuPont following her graduation, and worked in the DuPont Library, dealing with patents. It was there that she met **Wallace Carothers**, the discoverer of nylon, whom she eventually married!

50's

Richard H. Hall (MS52, PhD53) has died in Midland, MI. Richard had been Imtech's Director of Research, and had also worked for Dow.

Louis R. DePrisco (BS53) having retired as a General Manager of Imperial Chemical Industries is living in Naples, FL. There, he is a member of the Board of Directors of the Shamrock Bank of Florida and a member of the President's Council for Ave Maria University. lrdep@aol.com

Donald A. Pascal (MS53, PhD58)["Phunny Dude"] notes that the full name of Li Na, the 2014 Australian Tennis Open Champion, is Li Na K Rb Cs Fr. pascal@mindspring.com

Stewart C. Brown (MS54, PhD57) died on 10/27/13, at the age of 85. Following his service in the U.S. Marine Corps during the Korean War, for which he received a Purple Heart, he spent most of his career as a research chemist at the Hercules Research Center.

60's

Robert S. Marianelli, Ph.D. (BA63) died on 12/22/13 of Lou Gehrig's disease in Columbia, MD at the age of 72. Bob was a major figure who helped shape many of the U.S. government's chemical sciences activities during the 80's and 90's. Following the completion of his doctoral studies at UC-Berkeley, in 1966, he accepted a faculty position at the University of Nebraska, Lincoln. He joined the Energy Research & Development Administration (later, part of the Department of Energy) in Washington, DC in 1977 as a program manager, and eventually became the Director of the Chemical Sciences Division. There, he fostered the careers of many exceptional chemists, including six who later received Nobel Prizes. In 1998, Bob accepted a position as Assistant Director for Physical Sciences and Engineering with the Office of Science & Technology Policy in the Clinton Administration [See full obituary in **C&E News**, 4/7/14, p.51.]

Florence K. Helfrech Williams, Ed.D. (BA63) died on 5/7/14, at the age of 73. Flo earned a master's degree in science education from West Chester University and a doctorate in education from Temple University. Her teaching career was spent at Avon Grove (PA) High School, where she taught chemistry, biology and earth science.

Laurence E. Brydia (PhD64) died on 8/16/13 in Union Township, NJ, at the age of 79. Larry spent his entire career as an analytical chemist with Union Carbide, first in the corporation's South Charleston, WV laboratories, then at their Bound Brook, NJ location. [See full obituary in **C&E News**, 1/27/14, p.35].

Corey W. Ericson (PhD65) died of liver cancer on 3/22/14 in Waynesboro, VA.

Carl Gotzmer, Jr. (MS66), ST Distinguished Scientist in the Energetic Materials Research and Technology Department of the Indian Head (MD) Division of the Naval Sea Systems Command, has received one of the 58th Annual Department of Defense Distinguished Civilian Service Awards. The Award was presented to Carl during a ceremony held on 11/18/13 in the Pentagon Auditorium.

Ben M. Dunn, Ph.D. (BS67) is a Distinguished Professor in the Department of Biochemistry at the University of Florida. bdunn@ufl.edu

John E. Gardner (PhD67), retired senior staff scientist at the Bayer Corp., passed away on 12/19/13 in Lititz, PA.

Henry J. Gysling (PhD67) was one of 99 distinguished chemists named as 2014 ACS Fellows. Henry (or "Harry," as I knew him) was your Editor's first doctoral student. He retired from the Eastman Kodak Research Laboratories, having been elected to their Inventors' Hall of Fame, and is now the Research Director of CatAssays, in Rochester, N.Y. [**C&E News**, 7/14/14, p.47]

Nathan Klein (PhD67) is living in retirement in Baltimore, MD.

S. Dale Patterson Adams (MS67) died, at 68, of heart failure in Chattanooga, TN. on 7/15/13. Dale was one of the first African American students to have graduated from Washington College and was a longstanding member of the College's Board of Trustees. She retired from her position as a senior analytical group leader for Alco Chemical in 1996.

Joseph J. DeStefano (MS68, PhD72) is the President of Advanced Materials Technology, in Wilmington, DE.

John L. Irvine, Ph.D. (MS68) has retired from Klockner, in Gordonsville, VA. jlirvine@earthlink.net

Robert A. Pribush, Ph.D. (BS68), Professor of Chemistry at Butler University, has been selected to be the recipient of the 2014 Award for Volunteer Service to the ACS.

Thomas C. Parvis (BS69) is a marketing manager with LyondellBasell in Houston, TX.

70's

Martin A. Cohen, Ph.D. (BS71) is now the Director of Commercial Technology for Michelman, Inc., in Cincinnati, OH. martycohen@michelman.com

Nelson A. Johnson (PhD72) is living in Ocean Isle Beach, NC, having retired from his position as a research manager in the Merck Research Laboratories. Johnsonsn@bellsouth.net

Richard T. Taylor, Ph.D. (BS72) has been appointed to the position of the University Director of Liberal Education at Miami (OH) University. taylorrt@miamioh.edu

Kenneth S. Rosenthal, Ph.D. (BS73) has assumed Emeritus status at the Northeast Ohio Medical University. He still plans to teach half-time, and work on the 8th edition of his textbook "Medical Microbiology," the 7th edition of which was published by Elsevier in 2012. Last year, Ken received the Liebelt-Wheeler Faculty Excellence Award from NEOMU. ksr@neomed.edu

Robert D. Athey, Jr. (PhD74) died on 2/5/13 in El Cerrito, CA. Early in his career, Bob worked at International Paper, Scott Paper, General Tire, the Mellon Institute of Industrial Research, Swedlow, and B.F. Goodrich. In 1983, he founded Athey Technologies, a consulting and contract research company. He retired in 2004. [See full obituary in **C&E News**, 10/28/13, p.40.]

As reported in BHC #39, **Charles W. Stanger, Jr.** (PhD74) and his wife, Jo, embarked on their self-described "gypsy lifestyle" in 2012, traveling around the North American continent in their 400 ft2 motor home. They've been on the move ever since, save for spending their winters in AZ. They finally made it to DE (their 47th state!) this past June, enabling your Editor to enjoy a delightful reunion with Charlie, who received his doctorate working with (the late) **Prof. Wayne P. Anderson** (FAC68-75). crabbie.charlie@gmail.com

Gary H. Weddle (PhD76), Professor of Chemistry at Fairfield (CT) University, has spent most of his summers engaged in research at Yale University. His recent work has reached fruition as a co-authored paper in the pages of **Science** (2014, 1009-1012).

Jeanne E. Pemberton, Ph.D. (BS77) is both the Regents' Professor and the John & Helen Schaefer Professor of Chemistry at the University of Arizona.

David C. Calabro, Ph.D. (MS78), a Research Chemist at ExxonMobil, returned to campus on 8/28/13 to present a seminar on "The Acid-Base Chemistry of CO2 Capture with Liquid Amines."

William D. Luzier (BS78) and **David A. Plastino** (BS78) are members of the U of D College of Arts and Sciences Dean's Advisory Council.

80's

I. Frank Cheng, Ph.D. (BS82), Professor of Chemistry at the University of Idaho, Moscow, returned to campus on 7/10/14 to present a special seminar on "Synthesis and Electrochemical Properties of GUITAR: A Breakthrough Material for Energy Storage."

Brian G.R. Treco, Ph.D. (BS82) is the Head of Business Development, North America for Syngene, in San Francisco. trecob@aol.com

Richard J. Karpowicz (MA83, PhD84) is an Adhesives Development Manager for UPM Raflactac, in Asheville, NC. richkarpowicz@me.com

Lawrence M. Principé, Ph.D. (BS83) seemed to be omnipresent on campus this past spring (see Alumni Awards article). His lecture on "The Stubborn Myth of the "Warfare" between Science and Religion" on 4/22/14 attracted a packed house in Kirkbride 100. On 5/3/14, he spoke to a jammed Rodney Room audience as the Keynote speaker for the 31st Annual Senior Thesis Symposium. He recalled how, as a senior Honors student, he spoke at the very first Senior Thesis Symposium "to an audience of about a dozen people." Larry was also widely quoted in an article describing the Chemical Heritage Foundation's acquisition of a collection of rare medieval alchemy texts [**C&E News**, 1/13/14, pp.30-31].

Jonathan L. Schuchardt (PhD85), a partner at Dilworth IP, has moved to Rio Rancho, NM. jschuchardt@dilworthip.com, jjswagger2@gmail.com

John A. Teagle (MS86) is the Manager of Product Development for Erachem Comilog, Inc. ("The Manganese Source") in Baltimore, MD. john.teagle@erametgroup.com

Andrew D. Hollenbach, Ph.D. (BS89), Associate Professor of Genetics at Louisiana State University, New Orleans, is the author of "A Practical Guide to Writing a Ruth L. Kirschstein NRSA Training Grant," published by Academic Press. aholle@lsuhsc.edu

Jon S. Kauffman (PhD89) has celebrated his silver anniversary working with what is now Eurofins Lancaster Labs in his hometown of Lancaster, PA. He spent 2013 as the acting Managing Director of their lab in Ireland. He has also served as an Adjunct Professor at Millersville University for over 20 years.

Kristi L. Kick, Ph.D. (BS89), Deputy Dean in the College of Engineering, has been named as a 2014 ACS Fellow for her contributions to science and the profession of Chemistry. She is also a Professor in the Departments of Materials Science and Chemical and Biomolecular Engineering. [**C&E News**, 7/14/14, p.47]

90's

Christopher W. Grote (PhD91) and the love of his life, Angie, tied the marriage knot on 7/12/14.

Michael J. Bower Ph.D. (BS92) is now a Research Scientist with Vertex, in Boston, MA. michaeljbower88@gmail.com

Timothy A. Sherwood (PhD92), Professor of Chemistry at Westminster College, New Wilmington, PA, is serving as the Chair of the Chemistry Department.

William J. Donovan, Ph.D. (BS96), Associate Professor of Chemistry at the University of Akron, has been appointed to membership on the Board of Trustees of the ACS Exams Institute. wdonovan@uakron.edu

Tinu Adewole (BS97) is the East Territory Manager for diaPharma, in West Chester, OH. tadewole@diapharma.com

Sujata K. Bhatia, M.D., Ph.D. (BS99) Assistant Director of Undergraduate Studies in Harvard University's Department of Biomedical Engineering, has received a Class of 2014 Favorite Professor Award. sbhatia@seas.harvard.edu

John C. Scali, Ed.D. (BA99), a chemistry teacher at Concord High School for the past 15 years, has been named the 2013 Delaware High School Teacher of the Year by the Delaware Section of the ACS.

00's

Suzanne Bart (Doucette), Ph.D. (BS01), Assistant Professor of Chemistry at Purdue University, has received a Young Investigator Fellowship from the ACS Division of Inorganic Chemistry for her outstanding research in the field of organometallic chemistry. sbart@purdue.edu

David W. Finneran, Ph.D. (BS02, MS03), Assistant Professor of Chemistry at Miami Dade College, welcomed the newest addition to the Finneran clan, Charlotte Louise (formerly known as Peapod while in utero) with a brief swan dive last September. Father, baby, and mother, and Charlotte's three siblings are all doing fine. davidfinneran@gmail.com

Kristine A. Nolin, Ph.D. (BS02), Assistant Professor of Chemistry at the University of Richmond returned to campus on 10/24/13 to present an organic seminar on "Catalytic Activation of Strained Ring Systems."

Carrie L. Ziemniak, M.S. (BS04), the Laboratory Manager in Dr. Deborah Persaud's Laboratory at Johns Hopkins University, has co-authored a paper that describes the first case of a child who seems to have cleared a diagnosis of HIV (**New England Journal of Medicine**, 2013, DOI: 10.1056/NEJMoa1302976). The paper was highlighted in an accompanying editorial. carriez@jhmi.edu

Christopher W. amEnde, Ph.D. (BS05) is a Senior Scientist in Neuroscience Chemistry with Pfizer in Groton, CT. Christopher.amende@pfizer.com

Holly Gloeckler (BS05) is a chemistry teacher at Cheltenham (PA) High School. hgloeckler@cheltenham.org

Christina M. Kollias, Ph.D. (BS05) received her doctorate in Microbiology and Immunology from the Drexel University College of Medicine in 2013. She is now a Post-doctoral Fellow at Drexel. ckblueyed@aol.com

Matthew F. Roberts, Ph.D. (BS05) is a Biopharm Specialist with GlaxoSmithKline. He and Carly Anne Shanahan, Ph.D. were married on 5/31/14. Matt and Carly met in 2008, when both were graduate students at Yale University. They reside in King of Prussia, PA.

Mark P. Schopfer, Ph.D. (BS05) is a consultant with Alcimed, in Princeton, NJ. mark.schopfer@alcimed.com

Tyler A. Zimmerman, Ph.D. (BS05) is a Post-doctoral Fellow in Northwestern University's Proteomics Center of Excellence in the Silverman Hall for Molecular Therapeutics and Diagnostics, Evanston, IL, working with Prof. Neil Kelleher. tyler.zimmerman@northwestern.edu

Kevin D. Joye, M.S. (BS06) is a Research Associate II with the Depuy Synthes Companies of Johnson & Johnson, in West Chester, PA. Kevin is also an Adjunct Professor at Rowan University, in Glassboro, NJ. kevin.joye@gmail.com

Richard J. Karpowicz, Jr., Ph.D. (BS07) has completed his doctoral studies at Columbia University.

Katharine M. (Frysinger) McEvoy (BS07) is a chemistry teacher at Ursuline Academy, Wilmington, DE kfrysinger@gmail.com

Tapan P. Patel, M.D., Ph.D. (BS07) completed the arduous task of earning the double degrees noted at the University of Pennsylvania in 2013. He is now in UPenn's medical school for clinical rotations, having settled on anesthesiology and critical care for residency. tapanp@mail.med.upenn.edu

Carine M. Tata (BA07) is pursuing a doctoral degree in optometry at Nova College of Optometry. ct873@nova.edu

Megan C. Kuhfuss (BS09) is a Senior Consultant with Booz/Allen/Hamilton, in Belcamp, MD. kuhfuss_megan@bah.com

Wesley H. Monillas (PhD09) is a Research Scientist in the Corrosion and Wear Branch of the Materials Engineering Division of the Naval Air Warfare Center's Aircraft Division in southern Maryland. Wesley.monillas@navy.mil

Michael T. Pirnot (BS09), a doctoral candidate at Princeton University in the laboratory of Prof. David MacMillan, is the first author of a paper in **Science**, 2013, 339, 1593-1596).

Pumtiwitt C. Rancey (PhD09) is an Assistant Professor of Chemistry at Morgan State University, in Baltimore MD.

Nicholas Zeringo, Ph.D. (BS09) received his doctorate in biochemistry from the University of Toledo in 8/14, and is now a Post-doctoral Associate in the School of Medicine at Yale University.

10's

Piyal (PhD10) and **Lushanti De Zoysa Ariyananda** (PhD10) are the proud parents of their second son, Janindu Sankalpa, born on 5/19/14. All concerned are doing well. Piyal is the Head of R&D for Midas Safety, in Katunayake, Sri Lanka. Lushanti is a Lecturer at the Institute of Chemistry. pariyananda@lankasafety.com, ariyananda@gmail.com

David Meninger (BS10) married Katie, the love of his life, last October. Dave is the Area Director for Young Life, in Southbury, CT.

Nathaly J. Murillo (BS10) has changed her working venue to SAP, AG, in Newtown Square, PA.

Timothy E. Gilpatrick (BS12) has completed his two-year fellowship at NIH, and will initiate his doctoral studies at John Hopkins University in August.

Kammas R. Murphy (BA12), a chemistry teacher at St. Elizabeth High School in Wilmington, has been named a Dow NSTA Fellow – one of 200 new Science Teacher Academy Fellows selected by the National Science Teachers Association.

Justin Teesdale (BS13) has ridden a rollercoaster of emotions since January, when his doctoral mentor at the University of Chicago, **Prof. Gregory Hillhouse**, was diagnosed with late stage pancreatic cancer. He died six weeks later. Before his death, he arranged for Justin to transfer to Harvard University this fall to work in the laboratory of **Prof. Theodore Betley**. On a much happier note, Justin has been selected to be the recipient of the 2014 ACS Division of Inorganic Chemistry Undergraduate Research Award, in recognition of the outstanding work that he did in the laboratory of **Prof. Joel Rosenthal**. He was chosen from a pool of nominees that included students from Harvard and Dartmouth.

Alyssa M. Hull (BS14) has a very special year in store for her. Prior to beginning her doctoral studies in chemistry at Duke University, she will spend 2014 - 2015 in Norway, as a Fulbright Scholar, studying the pigment degradation occurring in the paintings of Edward Munch, including his iconic piece, **The Scream**, painted in 1910.

Sincere Thanks

As it has been the case for the past two decades, the production of BLUE HEN CHEMIST #41 has been a team effort:

Editoral content: **your faithful Editor**

Word processing: **Linda Staib**

Photograph archiving: **Susan Cheadle**

Layout, formatting, & photography: **Carrie G. Bonnett**

Printing and distribution: **University Printing**

My sincere thanks to all!

- JB

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The Blue Hen Chemist is an annual magazine distributed by the Department of Chemistry and Biochemistry at the University of Delaware. Its purpose is to reach out to our extended CHEM/BIOC family members: current residents, alumni, friends, retirees and benefactors, both individual and corporate; to keep them abreast of the goings on in the Department, to put old family members and new ones in touch with one another, and to give credit and thanks to the contributions of all.

The individual contributions of all, past and present, is the foundation that has built and continues to grow the Department and advance the mission that maintains our tradition of excellence in teaching and research. The financial support of the benefactors of the Department, whose generous contributions make it possible to recognize excellence among our students and faculty, gives the Department the opportunity to bring in world renowned speakers who further advance the knowledge base and skills of our faculty and students, and allow us to continue the mission of recruiting the best and brightest students and faculty to join our ever growing family.

Please, on behalf of the Department, accept these sincere thanks for the generosity of all. So, without further ado, we would like to express our sincere appreciation to the following companies and foundations for their unrestricted financial support of the Department during 2013-2014:

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The Department would like to acknowledge, with extreme gratitude, financial support from the following alumni, parents, faculty members, staff members, and friends during 2013-2014. Your support has always been important to us; however, in these stressed financial times, it is like manna from heaven!

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Sincere thanks to all the friends and alumni who have made generous contributions over the past year. Your gifts are used for many worthwhile purposes – to create professional development opportunities for our students, to support programs that enrich our curriculum, to fund special events that deepen our understanding of modern chemistry and to reward exemplary performances.

To make a gift to the Department of Chemistry and Biochemistry, please visit our online form at www.udel.edu/makeagift. This form allows you to give via check or credit card. When you visit the form, please earmark your gift to the Department of Chemistry and Biochemistry in the "Other Designation" box. To mail in a check, please indicate "Chemistry and Biochemistry" in the check's memo section, and mail it to: University of Delaware, Office of Annual Giving, 83 E. Main St., Newark, DE 19711. For additional information and how to make a gift, please call the Development Office's toll free number at 866.535.4504 during normal business hours, or email annualgiving@udel.edu.

NAMED CHEM/BIOC LECTURESHIPS

Our Department has established three named lectureships that are held annually to honor former distinguished members of our faculty. Gifts from alumni and friends to the endowments that support these lectureships are most welcome and appreciated:

Richard F. Heck Award and Lectureship

The Heck Award and Lectureship was established in 2004 to honor **Emeritus Professor Richard F. Heck**'s seminal contributions in palladium-catalyzed cross couplings and other transition metal-catalyzed transformations. The former was recognized by Prof. Heck's being awarded the 2010 Nobel Prize in Chemistry (shared with Profs. Ei-ichi Negishi (Purdue University) and Akiro Suzuki (Hokkaido University)). Prof. Heck was a University of Delaware faculty member from 1971 to 1989.

John C. Wriston, Jr. Memorial Lectureship

This memorial lectureship was created in 2007 in honor of **John C. Wriston**, who taught at UD from 1955-85. Dr. Wriston was the first biochemist in what was then the Department of Chemistry. He played a major role in the formation and growth of the Biochemistry Division within the Chemistry Department, which eventually renamed itself as the Department of Chemistry and Biochemistry.

Mary Elizabeth Kramer Memorial Lectureship

Our newest Lectureship (initiated in 2012) recognizes the devoted service provided by (the late) **Ms. Kramer**, as she taught thousands of CHEM-103/104 General Chemistry students from 1986-2012. It will support an annual lecture presented by a leading authority in the field of chemistry education.

The following awards and funds have been endowed through generous donations from our alumni and friends:

Kevin Scott Beall Memorial Awards [1994]: These awards of $500 are presented to the most outstanding freshman chemistry and biochemistry majors. They are given in the memory of a graduate of the Department who was killed in an automobile accident in 1993.

Wallace H. Carothers Scholarships [1980]: These awards, presented by an anonymous donor to students in chemistry or biochemistry, are to commemorate the achievements of this pioneer in polymer chemistry. The $500 awards, based on academic merit, have traditionally been given to the students deemed to be our most outstanding sophomore chemistry and biochemistry majors.

Frank W. Collins Undergraduate Award in Biochemistry [2002]: An endowed award given to the graduating senior who best exemplifies scholarship in biochemistry. The award consists of an honorarium of $500, provided by the Frank W. Collins Endowment.

Elizabeth Dyer Excellence in Chemistry and Biochemistry Undergraduate Award Fund [1989]: supports awards (currently two $2.5K awards/year - one to a CHEM major, one to a BIOC major) given to senior majors in recognition of excellent performance in one or more of the following areas: scholarship, research and service to the Department. The awards honor **Prof. Elizabeth Dyer**, faculty member 1933-1971.

Elizabeth Dyer Excellence in Teaching Award Fund [1982]: supports awards (currently $300-$600, depending upon the number of awardees) given to graduate teaching assistants in the Department for excellent achievement in the teaching of chemistry.

Quaesita Drake Scholarship Fund [1969]: supports scholarships (currently four $1.5K scholarships/year) given to outstanding junior or senior women who are chemistry or biochemistry majors, on the basis of academic accomplishment and potential and excellence of character. The funds for these awards are obtained from gifts of alumni and alumnae to honor **Prof. Quaesita Drake**, chairperson of the Women's College Chemistry Department for over 25 years.

Alberta E. Edge Fund: This fund, created from the estate of **Alberta E. Edge** (BA35), underwrites the financial component of the awards given to outstanding senior (American Institute of Chemists Award, currently $1000) and junior (American Chemical Society Award, currently $1000) CHEM or BIOC majors, as well as the two senior Merck Index Awards (currently $500).

Brennie E. Hackley, Jr. Award for Excellence in Research [2009]: Given annually [currently $2,000] to a graduate student who has demonstrated excellence in research. It honors the memory of **Dr. Brennie E. Hackley, Jr.** (UD Ph.D. '57), who devoted his remarkable 57-year career at the Edgewood Chemical and Biological Center, Aberdeen, MD Proving Grounds to the development of medical antidotes to chemical warfare agents.

Wallace H. McCurdy, Jr. Undergraduate Award in Analytical Chemistry [2000, reconstituted 2007]: An award given to the graduating senior in the Department of Chemistry and Biochemistry who best exemplifies scholarship in analytical chemistry. The award consists of an honorarium of $500. The award honors **Wallace H. McCurdy, Jr.**, faculty member 1959-1992.

William A. Mosher Fund: supports fellowships for CHEM/BIOC graduate students. The fellowships honor **Prof. William A. Mosher**, who chaired the Department from 1945 to 1969.

James A. Moore Undergraduate Award in Organic Chemistry [2000]: An award given to the graduating senior in the Department of Chemistry and Biochemistry who best exemplifies scholarship in organic chemistry. The award consists of an honorarium of $500. The award honors **Prof. James A. Moore**, faculty member 1955-1988.

Joseph H. Noggle Undergraduate Award in Physical Chemistry [1999]: supports an annual award (currently $500) given to the graduating senior who best exemplifies scholarship in physical chemistry. The award honors **Prof. Joseph Noggle**, faculty member 1971-1998.

Gene J. and Frances E. Schiavelli Undergraduate Research Fellowship [2005]: An award (currently $500) given to an undergraduate chemistry or biochemistry major who shows special promise as a research scientist, as demonstrated by work accomplished during his or her academic career. The award is supported by an endowment provided by **Dr. Mel Schiavelli**, University Provost (1994-2001).

C. Frank Shaw III Undergraduate Award in Inorganic Chemistry [1992]: The award, presented by **Dr. C. Frank Shaw III** '66, Emeritus Professor of Chemistry at Illinois State University, is given for outstanding classroom and laboratory performance in inorganic chemistry by an undergraduate chemistry or biochemistry major. The stipend is $500.

C. Frank Shaw III Undergraduate Inorganic Research Fellowship [2010]: This $500 award, endowed by **Dr. C. Frank Shaw III** '66, Emeritus Professor of Chemistry at Illinois State University, is given to an undergraduate CHEM/BIOC major who demonstrates exceptional aptitude and promise for research in the area of inorganic chemistry. The primary intent of the Fellowship is directed at providing financial support for a junior CHEM/BIOC major engaged in full-time research in inorganic chemistry during the winter (usually) or summer session. Awards to senior, sophomore, or freshmen students are not precluded, should the situation warrant them. Selection of the recipients will be made by the members of the INOR Division.

Joel Silver Award Fund [1973]: supports an award (currently $300) given in memory of **Joel L. Silver**, a graduate student killed in a traffic accident in his last doctoral year (1971), that recognizes excellent achievement in research, as well as a highly professional presentation of results at an annual symposium.

Glenn S. Skinner Award Fund [1968]: supports an annual award (currently $3K) to a graduate student in recognition of distinction in scholarship, research and service to the Department. The award honors **Prof. Glenn S. Skinner**, who was a chemistry faculty member from 1928 to 1958.

Trofimenko Memorial Prize [2007]: This $500 award, in memory of **Dr. Swiatoslaw 'Jerry' Trofimenko**, creator of the polypyrazolylborate ligand system and visiting scholar in the Department from 1996 until his death in 2007, is given annually to a graduate student in the Department who has distinguished him/herself in the area of 'creative inorganic synthesis.'

Carl A. von Frankenberg Undergraduate Award in Chemistry Education [2005]: supports an annual award (currently $500) given to the graduating senior who best exemplifies scholarship in, and the practice of, chemistry education. The award honors **Prof. Carl von Frankenberg**, faculty member 1961-1997.

UNIVERSITY OF DELAWARE | College of Arts & Sciences
DEPARTMENT OF CHEMISTRY & BIOCHEMISTRY

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Delaware Degree(s) [Date & Advisor] _____

Home Address _____

_____

Home Phone (_____) _____ Home E-mail _____

Company _____ Address _____

Your Position _____ Company Phone (_____) _____

Fax Number (_____) _____ Company E-mail _____

Other Degree(s) [Date(s) & School(s)] _____

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The Departmental Seminars and Colloquia schedules are located on the UD Departmental web page (www.udel.edu/chem).

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