

CHEMISTRY WELCOMES TWO NEW LECTURERS TO THE DEPARTMENT

Dr. Ava Rose Kreider-Mueller discovered her passion for chemistry while an undergraduate at Bard College, in Annandale-on-Hudson, NY. She first fell in love with Clemson during the summer of 2008, while working in the lab of Dr. William T.



Pennington as a SURP student. Ava went on to pursue her graduate work in inorganic chemistry at Columbia University in the City of NY, working as a joint student in the research labs of Gerard Parkin and Jonathan S. Owen. Her graduate work focused on the synthesis, structure, and reactivity of Group 12 metal complexes in sulfur and nitrogen-rich environments. Upon graduation, she joined the faculty at Clemson.

Christopher Wilson, a native of Alabama, earned a BA in French and a BS and PhD in Physical Chemistry from the University of Colorado at Boulder. His research focused on the atomic layer deposition mechanisms and characterization of metal and metal oxide thin film and nanostructured materials with particular relevance to nanoelectronics fabrication. While an undergraduate he lived in France



to teach English for a year to elementary school students, as well as to work for a summer in a physics research laboratory. Prior to joining the faculty at Clemson, Chris taught at Creighton University. He has taught courses in physical chemistry, general chemistry, instrumental analysis, the history and philosophy of science, and scientific writing. A scout for life, his interests and pursuits also include wilderness and mountain trekking.

Message from the Chair

On behalf of Faculty, Staff and students, I send greetings to Alumni and Friends of the Clemson University, Department of Chemistry. The fall semester is winding down and we are in the midst of final examinations and bringing the year to a close.

It was a pleasure to lunch with Kirk (1957 Clemson University alumnus) and Betty Sullivan when they visited Clemson this fall on alumni appreciation day. They have established the J. Kirk and Betty Sullivan Chemistry Scholarship Endowment for undergraduate students majoring in chemistry. Current recipient, Greer Chambers, had the opportunity to meet Kirk and Betty. On October 24, Professor J. F. Ogilvie gave a lecture on the "Photochemistry of Methane at 3 K" in honor of Professor Joe von Rosenberg, Jr. Dr. Dale Buchanan (1978 Clemson Chemistry graduate) and his wife Cathy are funding a lecture series in Professor von Rosenberg's memory and had a chance to meet Professor von Rosenberg's son Joe. It was announced that Professor Emeritus Duane Eubanks is the 2015 recipient of the George C. Pimentel Award in Chemical Education.

It is always a pleasure to recognize our recent graduates and congratulate them on completing this phase of their career journey. At the August 2014 commencement, Prakash Kandel (Christensen) graduated with a Ph.D. joining two M.S. and two B.S. graduates.

In August the department held a retreat for strategic planning purposes. We agreed to reexamine our undergraduate and graduate curricula, develop strategies for maintaining and purchasing new research equipment, and institute a Board of Visitors. These activities are underway and will continue into the coming year. A search is underway for a tenure track hire in any area of Chemical Biology to replace Professor Ken Christensen who is leaving for a position at Brigham



Young University next summer. Drs. Ava Kreider-Mueller and Christopher Wilson joined the department in August as instructors. Ava is teaching in the General Chemistry curriculum and Christopher in General Chemistry and the P-chem laboratory courses.

Hunter Laboratory is undergoing a major refurbishing of the ductwork to the hoods during the winter session between semesters, which will continue on into next summer. We are guardedly optimistic that this upgrade will resolve the hood airflow problems and bring all of our hoods into regulatory compliance.

The faculty continue to be successful in attracting research funding and pursuit of the goals identified in our strategic planning process should strengthen the department in its teaching and research missions. We are grateful for your support and loyalty and wish you a safe and enjoyable Holiday season and a prosperous New Year.

R. KARL DIETER, DEPARTMENT CHAIR

R. Karl Dieter



CONGRATULATIONS TO OUR AUGUST 2014 GRADUATES

PhD

Prakash Kumar Kandel

MS

Natasha Khan
Zhengzin Wang

BS

Joseph Richard Blackmon-Dishaw
Bobby Antawn Smith

WELCOME BACK PICNIC

The Chemistry Department met for their annual welcome back picnic on August 28, 2014, at the beautiful Outdoor Lab located on Lake Hartwell.

The picnic was well attended by faculty, staff and students. The picnic menu was enjoyed by all, particularly the students. A lucky few won door prizes sponsored by CGSO. The new chemistry department t-shirt was handed out and it seemed to be a particularly popular design. It was a great start to the new semester!



CLEMSON STUDENTS AWARD WINNERS AT FLUOROPOLYMER 2014

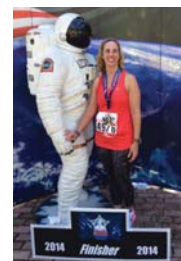
Two students in the research group of Dr. Joe Thrasher were poster winners at the Fluoropolymer 2014 meeting held in San Diego, California on October 13-16.



The students, **Cameron Parish** and **Daniel Hercules**, won two of the four awards presented for poster presentations. **Cameron Parish** won one of the two Best Poster Awards for Sustainability, sponsored by Solvay Specialty Italy on the poster entitled "Toward New Perfluoroalkoxyl Co- and Terpolymers with Tetrafluoroethylene (TFE)". **Daniel Hercules** won one of the two Best Poster Awards sponsored by Texas State for the poster entitled "Co-polymerization Kinetics of Sulfonyl Fluoride-substituted Trifluorovinyl Ethers with Tetrafluoroethylene (TFE) in the Presence and Absence of Gaseous Carbon Dioxide (CO₂)". **Congratulations to Daniel, Cameron and the Thrasher group.**

WHERE ARE THEY NOW?

Dr. Rosa (Bailey) Walsh received her B.S. in Chemistry in 1995



and her Ph.D. in Inorganic Chemistry in 2001, working with Dr. Bill Pennington. She took a postdoctoral research position with Dr. Mike Zawarotko at

the University of South Florida in 2001, and was subsequently hired as Departmental Crystallographer/Assistant Department Chair at USF. With a family move to Lakeland, Rosa worked for a time teaching high school chemistry, and then worked in Faculty Services Administration and as Coordinator for the Gifted and Talented Program of Central Florida through USF Polytechnic. In 2011, she became a Professor of Chemistry at Polk State College-Lakeland. Most recently, she has just been named as Director of Scientific Research for the Florida Department of Citrus, with responsibilities for leading the departments scientific research efforts and enhancing their mission to maximize demand for Florida citrus. On top of all that, she is raising four children (three sons and a daughter) and just completed her first marathon!

CHEMISTRY MOURNS THE PASSING OF PROFESSOR KAREN BREWER (1961-2014)

With great sadness we note the passing of Professor Karen Jenks Brewer on October 24th, 2014. Karen received her B.S. in Chemistry from Wofford College in 1983, and her Ph.D. in Inorganic Chemistry from Clemson in 1987, under the direction of Professor John D. Petersen. After postdoctoral work at the University of California-Berkeley, she joined the faculty of Washington State University as an assistant professor of chemistry on 1988. She moved to Virginia Tech in the fall of 1992 and rose through the ranks, being promoted to Full Professor in 2005. Karen's research in the areas of photochemical production of hydrogen gas and the use of supramolecular complexes of ruthenium, platinum, and rhodium, for the potential treatment of cancers by photodynamic therapy earned her an international reputation as a researcher. Throughout her academic career, Karen was a tireless advocate for women and minorities in chemistry. She participated in extensive outreach activities through local schools in order to promote chemistry as a career choice for women and served as an ideal role model and mentor for many female students. In addition to several awards for her achievements in research and her excellence in teaching, her outreach efforts were recognized through several awards, such as the Virginia Tech College of Arts and Sciences Diversity Award in 1996 and the Virginia Tech Alumni Award for Outreach Excellence this year. Karen is survived by her two daughters, Nicole and Caitlyn.



NEW FACULTY RESEARCH GRANTS

New Grant Awards in Chemistry

Dev Arya, "A Rapid Assay for RNA Targeted Drugs" \$263,000.00

Dev Arya, "Development of Peptide Antibiotic Nucleic Acids" \$132,246.00

Julia Brumaghim, "Selenium Antioxidant Mechanisms: Metal Binding vs. Reactive Oxygen Species Scavenging – International Collaboration Supplement to NSF-1213912 \$12,080.00

Kenneth A. Christensen, "Phage Display Selection of Antiangiogenic CMG2 Cyclic Peptide Antagonists \$214,590.00

Joseph W. Kolis, "Collaborative Research: Planning Grant: I/UCRC for the Ceramic, Composite and Optical Materials Center \$20,000.00

Jason D. McNeill, "Fluorescent Polymer Nanoparticles for Nano-Imaging and Sensing" \$326,972.00

Congratulations to all of these faculty for their hard work and success in winning grant support for their research!

J. Kirk and Betty Sullivan

J. Kirk Sullivan, a 1957 Clemson University alumnus and his wife, Betty were recently on-campus and hosted a lunch for Dr. James C. Fanning and several other current and retired chemistry faculty members. Dr. Sullivan and his wife, Betty, established the J. Kirk and Betty Sullivan Chemistry Scholarship Endowment which provides scholarships to chemistry undergraduate students. Mr. Sullivan has long shared his resources and time to enrich the Clemson experience for chemistry students. He also established the Dr. J. Harvey Hobson and Dr. James C. Fanning Scholarship Endowment in honor of two chemistry professors that made a significant impact on his life and career.

Dr. Sullivan earned his BS, MS and Ph.D. degrees from Clemson and is retired from Veritas Advisors, LLP, a Boise, Idaho-based, general management and consulting firm. He is also a member of Clemson's prestigious Thomas Green Clemson Academy of Engineers and Scientists.

Dr. and Mrs. Sullivan are shown with the current Sullivan scholar, Greer Chambers (left) and with Dr. and Mrs. Fanning (right).



Staff News

WELCOME

NANCEE EGAN

Our new Accounting/Administrative Assistant, Nancee Egan, transferred to Chemistry from the College of AAH-Global Engagement. Nancee is originally from Upstate New York and began working at Clemson in 2008. She and her family moved here from South Florida where she worked for several companies such as Office Depot and IBM. Nancee loves animals and volunteers her time at an animal shelter whenever she can. She also loves sports and travelling and has attended two Super Bowls so far! Nancee lives with her family in Hartwell, GA.



HOLLY STONE

We welcome Holly as the new Departmental Accountant for Chemistry and General Engineering. Holly previously worked as an Administrative Assistant for the Art Department and has been employed by Clemson University since 2011.



She grew up in the area and graduated from Clemson with a BS in Financial Management. After living in numerous states over the last 25 years with a career in pharmaceuticals, she moved back to SC with her teenage daughter. She stays busy running, working out, cooking, gardening, and checking in on her parents who still live in the area.



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STUDENT CHAPTER OF THE ELECTROCHEMICAL SOCIETY IS FORMED AT CLEMSON

Clemson's application to form a student chapter of The Electrochemical Society was granted final approval at 226th meeting of the Society that was held in Cancun Mexico in October 2014. The chapter consists of 14 student charter members from the departments of Chemistry, Chemical and Biomolecular



Engineering, environmental Engineering and Earth Sciences, Physics and Astronomy, and Materials Science and Engineering. Steve Creager, Professor of Chemistry and Faculty Advisor to the Chapter, says the following: "Chapter membership provides students with wonderful opportunities to network with each other and with chapter members from all over the nation and world through society meetings. The students have great plans for hosting visits by internationally-recognized scientists who will speak on topics of broad interest across the full range of electrochemical and solid-state science. I

am proud of the students for taking the initiative in forming this chapter and I am excited about seeing it develop here at Clemson."

The Electrochemical Society was formed in 1902 as an organization "concerned with a broad range of phenomena relating to electrochemical and solid-state science and technology". Herbert Dow, founder of the Dow Chemical Company, was a charter member, and Thomas Edison joined in 1903 and was a member for 28 years. The society sponsors two annual meetings and publishes five journals, two collections of meeting abstracts, and a quarterly periodical. The society has approximately 8000 individual members and 100 corporate members from over 70 countries. More information on the Society may be found at their web site, at <http://www.electrochem.org/>.

Comments? We would love to hear from you. Please email your comments or questions to Mary Standeffer at standem@clemson.edu and be sure to visit us on the Web at chemistry.clemson.edu.

Your generous donations support our seminar program which brings world-class scientists and educators to campus for public lectures, and also allows for the flexibility to respond to opportunities and pursue initiatives to make Clemson's chemistry department the best it can be. If you do not already do so, please consider designating a gift specifically to the Chemistry Department. You may do so by writing "Chemistry Department" under "Other" on any donation form you receive from the University, or by indicating the same on the online "Giving to Clemson" form accessible from the Clemson home page. If you do choose to donate, we thank you in advance for your support, whether you choose to designate it to chemistry or not!