



Periodic Trends

Issue 04
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Old Dominion University ~ Department of Chemistry & Biochemistry

This has been one of our busiest and saddest semesters. I say sad because our Department Manager, Alicia Herr and our faculty member of 40 years Dr. Patricia "Pat" Pleban both retired this month, and our Graduate Program Assistant Kristi Rehrauer moved to Georgia with her family to start a new job at Columbus State University (Assistant to the Dean of the Honors College – Congrats Kristi!). We will miss them greatly and the newsletter has more about their time here in the Chemistry and Biochemistry Department. It has also been a busy semester! We broke ground on our new 110,000 square foot Chemistry and Biochemistry Building and you can follow the time-lapse progression on our occasional Facebook posts as we have gone from a parking lot, to a hole in the ground, to a foundation (sometimes you can see the baseball team play in the background): https://www.facebook.com/pg/OldDominionUniversityChemistryandBiochemistry/?epa=SEARCH_BOX

We hired Dana Schilling as our new Department Manager. Dana comes with 23 years of experience working for the Commonwealth. She began employment with ODU in 1992 as the GPD Assistant and Grants Manager in Oceanography, eventually taking on roles as Business Manager and Director of Sea Camp. From 2007-2009 she was the College of Sciences Business and Public Relations Manager and from January 2009-2012 Dana was the Operations Manager for ODU's VCERC consortium. In 2012, Dana became the Budget Manager at Commonwealth ChalleNGe Youth Academy in Virginia Beach where she was responsible for their \$5 MIL state/federal budget. Welcome Dana!

We also hired Michele Floyd as our new Graduate Program Assistant. Michele comes to us from Mediterranean Shipping Company (MSC) in Norfolk. She was responsible for many aspects of the company's operations, travel, and international import/export processes as assistant to the President of the company. She has extensive international experience which fits perfect with ODU's diverse student population. MSC has offices all over the world and many MSC employees are ODU graduates. Welcome Michele!

This semester we carried out two successful lecturer searches which were very competitive and are in the process of carrying out a new Assistant Professor search. Our new lecturer hires are Chris Freeman who hails from VCU chemistry's graduate program and was recently a lecturer at Virginia Union, and Kory Castro who graduated from our own graduate program and has been responsible for instrument maintenance and training for the department for the last three years. Welcome Chris and Kory!

Keep reading this edition of Periodic Trends to find out about all the other exciting happenings within the Department.

John Cooper

Retirement of Dr. Patricia Pleban

Dr. Pat Pleban has been a faculty member in the Department of Chemistry & Biochemistry since August, 1979, when she was hired in support of the anticipated approval of the ODU-EVMS Joint Biomedical Sciences Program. At that time, the Department was establishing tracks in Clinical Chemistry and Biological Chemistry. As a graduate of the Cleveland State-Cleveland Clinic Foundation PhD Program in Clinical Chemistry, she was able to take the American Board in Clinical Chemistry and received Diplomate status in 1983 (emeritus status since 2005). She served as the Clinical Chemistry Program Director from 1988 – 2005, and as Biomedical Sciences Program Director for the Chemistry tracks between 1991 - 1998. Additionally, she served as Assistant Chair of the Department of Chemistry & Biochemistry from 1998 – June, 2014.

While at ODU, Dr. Pleban published 26 journal articles and more than 80 published abstracts and presentations at national and international meetings, most with ODU graduate and undergraduate students as co-authors. She has mentored 3 PhD and 19 MS thesis graduates. She established and served as Director for the ODU Trace Element Laboratory (1988 – 1995). In addition to providing trace element analyses for several area hospital, the lab was invited to participate in the 2nd and 4th IUPAC Interlaboratory Comparison Programs for measurement of several trace elements (cadmium, selenium, and lead) in human tissues. Dr. Pleban also served as an expert panelist in trace element analyses for the National Health and Nutrition Examination Survey (NHANES III) sponsored by the CDC, Division of Health & Injury Control.

In addition to graduate courses in biochemistry and analytical chemistry, Dr. Pleban has taught undergraduate courses in analytical chemistry (CHEM 321/322), biochemistry (CHEM 441/442W), and large lecture sections of general chemistry for science and engineering majors (CHEM 121N/122N/123N/124N). In 2016/17 she received the College of Sciences Distinguished Teaching Award for Tenured Faculty.

Dr. Pleban has served on numerous departmental, college and university committees and has been the University Alcohol Representative from 1997-present, Chair of the University Human Subjects Review Committee (now IRB) from 1998 – 2000, and a member of Faculty Senate 2007 – 2010. She has been the Chair of the Department Chemistry & Biochemistry Undergraduate Studies Committees from 2000 – present.

Dr. Pleban has been loved and valued member of our department for 40 years and we will miss her knowledge and guidance. We wish her the best in her retirement!



Retirement of Alicia Herr Department Manager

Our Department Manager, Alicia Herr retired this month after 37 years of service to the department. Here are goodbye messages from the Chair that hired Alicia back in 1982, Dr. Bob Ake, and from her last Chair, Dr. John Cooper:

Emeritus University Professor Robert "Bob" Ake: I hired Alicia. As part of the hiring process, I thought it would be a good idea to see how much knowledge of chemical stockroom equipment the applicant had, so I drew sketches of a few of them and asked her what they were. She didn't know what any of them were called. She flunked that test, but fortunately I threw out the results and hired her anyway.

I certainly have never regretted that decision. Alicia cares deeply about people and spends time to make sure they feel at home in the Chemistry and Biochemistry Department. She brings newcomers into the department family. If anyone has a personal need or want, they certainly know where to go for help or someone to talk to. She always gives generously of her time to help anyone who needs it. Alicia is a self-starter, and she doesn't have to be told each and everything to do. She not only completes all the tasks she's asked to do, but also discovers other jobs that need doing and simply gets them done in superb fashion. Her unique abilities and industriousness led to her shouldering the main responsibility for the redesign and resupplying of the instructional laboratories. That success was followed by the design and big move of equipment and supplies into the new wing of the physical sciences building. Which was followed recently by the design and construction of the new Chemistry Building. In every case she had to work with architects, contractors, construction people, faculty, students, and administrators to get each of these impressive projects completed and signed off. She has also been the social chairman for the department organizing the Thanksgiving Dinner from a modest beginning to the event now attended, loved, and enjoyed by scores of faculty and students. The departmental honors banquet and the recognition get-togethers are the result of her ability to get things done and to get others to help her get them done. Alicia has given a big part of her life to bringing the department to the vibrant and productive community of chemical scholars, students, and staff it is today. In addition to the many physical accomplishments that she will leave behind, she has been the glue of the department, holding it together through her commitment to all the people within the department, caring about them, and seeing that each person has a deep and fulfilling experience while they are here. Thanks, Alicia

Professor and Chair John Cooper: I was hired in 1993 and I couldn't wait to start! I started working with Alicia while I was still a postdoc ordering equipment and planning my lab. She was so efficient that the day I arrived much of my equipment had already been ordered. Alicia was the one who took an empty lab and had the lab benches and optics table installed (she had to use a crane to bring the huge optics table through the 2nd floor window of Pat Pleban's office!). We were friends from day 1 and she made me feel right at home. However, it was not until I became Chair that I truly was able to appreciate what a remarkable person she is. Behind every grand vision the faculty could come up with, there were countless tasks and details which she managed in a tireless manner always ending with success. During her tenure, we have grown to 25 faculty, 4 staff, 36 Teaching Assistants, and 5000 students being taught 17,000 credit hours each year, and Alicia has been the focused detailed-oriented manager behind this success. After watching me bumble my way through the first 3 years as Chair, she agreed to postpone her retirement an additional two years to help with the design of the new building and new hires while managing everything else. For this and for her daily friendship, I will forever be grateful. Above all else, perhaps more than anyone else I have worked with, Alicia maintained the highest standards of integrity. During her tenure she was a remarkable steward of state financial resources and assets. Thanks Alicia.



Kristi Rehrauer Graduate Program Assistant Moving to Georgia

Kristi's contributions to our graduate program have been quite impressive during the five years she has been with us. She was instrumental in developing a departmental administration of EPAF and EPAS. This administration is now being used as a model for both the College of Sciences and the Biomedical Sciences program. Speaking of Biomedical Sciences, you may not know this, but Kristi has been the Graduate Program Assistant for biomed ever since it became part of the graduate school (an additional duty she accepted being the only GPA with the requisite experience and skill set), and as a result, much of its recent success can be attributed to her hard work. Kristi's countless hours soared us into the social media age by launching and maintaining all of our departmental social media accounts. She was also responsible in launching and managing our semi-annual departmental newsletter Periodic Trends, which has been enormously successful in reconnecting with our alumni and attracting donations. There are many more "behind-the-scenes" efforts that have supported both faculty and grad students during her time here that will be sorely missed.

We wish Kristi and her family the best in Georgia!

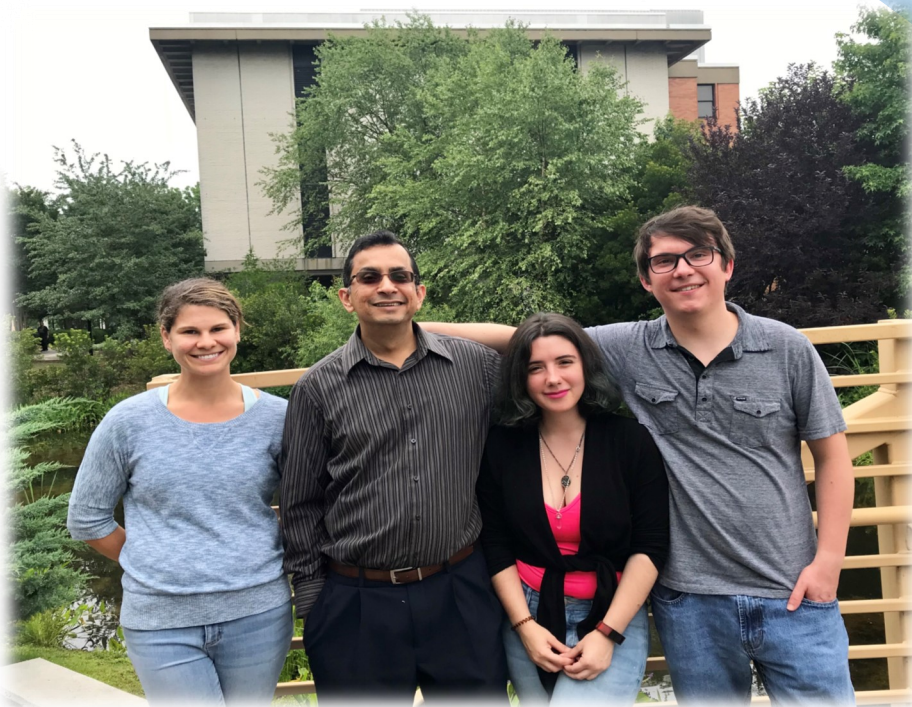


Dr. Guijun Wang 2019 Doctoral Mentoring Award



Congratulations to Dr. Guijun Wang, Professor in Chemistry & Biochemistry, for receiving the 2019 Doctoral Mentoring Award! Each year six outstanding tenured faculty members, one from each college, are recognized by the Graduate School for outstanding mentorship of doctoral students.

Research Spotlight - Dr. Bala Ramjee



L to R: Molly Bradish-Mulhearn; Dr. Bala Ramjee; Storm-Marie Allmon; Andrew Benedict

The Ramjee group is broadly interested in the interfacial area of nanomaterials, supramolecular chemistry and organic synthesis. Our research involves synthesis of nano and organic materials, towards applications in sensing, catalysis, imaging and guest encapsulation among others. A unifying theme connecting most of our projects is the use of macrocyclic resorcinarene cavitand based multidentate building blocks or ligands.

One main area of our research focuses on the synthesis and functionalization of nanocapsules with tunable physical properties for applications ranging from material science to nanomedicine. We have developed a thiol-ene photopolymerization based direct approach for the synthesis and *in-situ* orthogonal functionalization of hollow polymeric nanocapsules. Our functionalization strategies have been effectively employed for the solubilization of these nanocapsules in water and further expanded to generate highly fluorescent nanocapsules with applications in biomedical imaging. These nanocapsules can be employed as template reaction vessels for the synthesis of gold nanoshells or spherical aggregates of gold nanoparticles with applications in catalysis. Current work in our lab focuses on the stimuli-responsive behavior of these nanocapsules for the encapsulation of a variety of guest molecules towards various applications.

Our group has also developed multidentate surfactant mediated phase-transfer protocols for substantially enhancing the stability and processibility of various nanomaterials. We have enhanced the dispersion stability of a wide variety of nanodiamonds in non-polar organic solvents, for the fabrication of continuous diamond film by CVD growth. We have exploited multidentate resorcinarene surfactants for enhancing the stability of gold colloids and their optical sensing applications. Additionally, we have been investigating the effect of resorcinarene cavitand based multidentate ligands in the synthesis of mono- and bi- metallic nanoparticles. Our group showed that resorcinarene amine cavitand can lead to the formation of V-shaped anisotropic PdPt bimetallic nanoparticles, which can act as stable catalysts.

In collaboration with the group of Dr. Hani Elsayed-Ali, our group is currently working on a state-funded project for the development of highly-transmissive colored coatings for photovoltaic panels. We have also recently received funding for the development of fluorinated polymers for stabilizing perovskite solar cells in collaboration with Dr. Gon Namkoong's group.

2018-2019 Undergraduate Student Award Winners



Pictured from top to bottom of steps:

Outstanding Student in Inorganic Chemistry	Alicia Bryan
Outstanding Senior Thesis	Jenna Garcia
Outstanding Student in Organic Chemistry	Mary Olson
Outstanding Student in Physical Chemistry	Connor Orrison
Outstanding Student in Biochemistry	Nathan Jentink
Undergraduate Award in Inorganic Chemistry	Jennifer Mejia
Undergraduate Award in Organic Chemistry and	
Outstanding Graduating Senior in Chemistry	Elliot Johnson
Outstanding Student in Physical Chemistry	Michael Payette
Outstanding Student in Biochemistry	Naomi Stambaugh
Outstanding Student in Analytical Chemistry	Joe Carter

Not Pictured:

Outstanding Freshman Chemistry Student	Jubilee Benedict
Outstanding Graduating Senior in Biochemistry	Chenxi Luo

Great Job!

2018-2019 Graduate Student Award Winners and Graduates



Pictured from left to right:

M.S. Thesis Graduate

Dominion Scholar

Van Norman Travel Grant

Ph.D. Graduate Biomedical Sciences

Outstanding Graduate Student Poster

Dominion Scholar

Outstanding Teaching Assistant

Kory Castro

Surya Adhikari

Jonathan Bietsch

Martha Johnson

Joedian Morris

Alex Goranov

Megan Hept



Undergraduate B.S. Graduates Chemistry and Biochemistry 2018-2019



Pictured from left to right:

Back Row:

Corbin McElrath—Biochemistry (Post-Bac Program)
Jennifer Mejia—Chemistry (ODU PhD Program)
Michael Payette—Biochemistry (VA Tech PhD Program)
Naomi Stambaugh—Biochemistry (Applying to Med School)
Kristal Billups— Chemistry (Military)
Elliott Johnson—Chemistry (EVMS Med School)
Khadija Faye—Biochemistry (ODU PhD Program)
Tatiana Woodbury—Biochemistry (Military)

Front Row:

Jenna Garcia—Chemistry (Texas A&M PhD Program)
Nathan Jentink—Biochemistry (Penn State PhD Program)
Luke Weisentein—Chemistry (ODU MS Program)
Megan Lohr—Biochemistry (undecided)
Connor Orrison—Chemistry (Texas A&M PhD Program)

Not Pictured: Sara Worrill, Biochemistry/Psychology; Antaun Spence, Biochemistry; Cameron Young, Chemistry; Jacob Grant, Chemistry; Rebekah Webster, Biochemistry; Halie Mass, Chemistry/Oceanography; Sarah Azher, Biochemistry; Kurt Doyle, Biochemistry; Princess Hangka, Biochemistry; Adwoa Sike, Biochemistry; Sarah Farmer, Biochemistry; Raney Ward, Biochemistry; Tayana Cuffee, Biochemistry; Flynn Gladden, Chemistry; Chenxi Luo, Biochemistry; William Downey, Chemistry/Biochemistry; Michael Stanley, Biochemistry/Biology; Bria Ricks, Biochemistry; Ritsushi Miyamoto, Biochemistry; Sara Foxwell, Chemistry

2018-2019 M.S. and Ph.D. Graduates



Meghan Warden
Ph.D. Chemistry — Fall 2018
Postdoctoral Fellow for
Macromolecular Structure Group at
NIEHS in Research Triangle Park



Andrea Yawn
M.S. Chemistry — Fall 2018



Brittney Ruedlinger
M.S. Chemistry — Fall 2018
Ph.D. student in the ODU
Biomedical Sciences Program



Kory Castro
M.S. Chemistry — Spring 2019
Lecturer in the ODU Chemistry &
Biochemistry Department



Martha Johnson
Ph.D. Biomed — Spring 2019
Lab Technician for
Dr. Nancy Xu at ODU



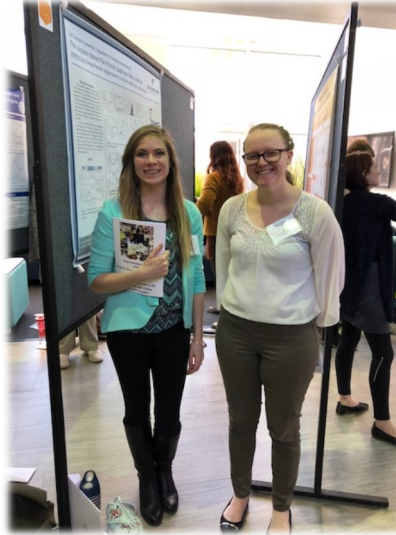
Graduate Students Present at ODU's Graduate Achievement Day

Thursday, March 28th, the Graduate School hosted its annual Graduate Achievement Day in Webb Center. More than 80 graduate students from over 21 departments took part. The Chemistry & Biochemistry Department had multiple graduate students participate. These are just a few of our graduate students with their posters.

We were well represented!



Ph.D. students Surya Adhikari and Jonathan Bietsch



Ph.D. students Andrea Clark and Macey Cohen



Ph.D. students Adenrele Oludiran and Ana Dreb

Meg Hept Receives the Graduate School and Office of Research's Graduate Summer Award

Old Dominion University's Graduate School recently announced the recipients of the Graduate Summer Research and Creativity grants, which help students work on summer research projects. Biomedical Sciences PhD student Megan Hept, works in Dr. Lesley Greene's lab, was one of those recipients. Megan's project is titled *"Assembly and Comparative Genomics of a Florida Isolate of Synechococcus: Towards a better understanding of the pan-genome and effects of climate change."*

An interdisciplinary group of faculty members and administrators from the University reviewed the applications and chose 10 winners out of 35 applicants.

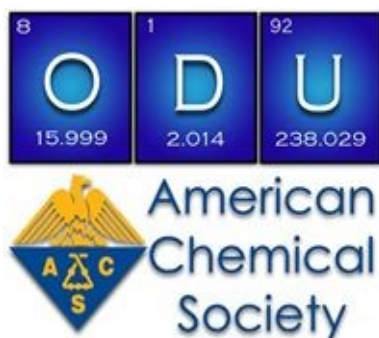
Megan will receive \$3,000, with an additional \$300 allowed for a conference travel related to the work. At the end of the summer, Megan will provide a report of her work to the Graduate School. Congratulations Meg!



Graduate Students Present at National ACS

I attended 257th American Chemical Society National Meeting and Exposition held in Orlando, Florida from March 31 to April 4, 2019. This meeting was a wonderful experience in terms of research showcase, learning about latest research developments happening all over the world as well as social networking as I got the opportunity to meet with many graduate students, post doc fellows and distinguished professors who work in the field of organic synthesis and carbohydrate research. First, I was very excited when I presented my research in the form of a poster. I was very delighted to showcase and explain the ideas behind my research. I received some very good feedback and felt motivated to work harder and produce more results. Also, there were many other poster sessions during which I was able to interact with many other presenters who gave me a glimpse of their research. One of the major aspects of the conference was attending lectures/talks from various Nobel Laureates and other professors like Francis Arnold, Phil Baran, David MacMillan, John F. Hartwig, James Fraser Stoddart to name a few. Witnessing the talks given by these distinguished professors/scientists made me aware about recent advancements in chemistry and also motivated me as a graduate student. It was a great exposure as the amount of information I have retrieved out of the sessions was enormous. I really look forward to producing more results so that I am able to present them on similar platforms and also get the opportunity to learn about new things at the same time. Another important highlight of the conference was attending the career fair where I came across many advanced instruments that are available and can be used for research purposes. There were many resources available which made me aware about different job opportunities and their requirements once I graduate. In addition to this, I also held the recruitment booth for College of Sciences which provided me an opportunity to spread a word about many Master's and Doctorate programs and research facility available in the college. Many undergraduate students stopped by and were interested to know about the type of research and programs we have at College of Sciences at ODU. I was very happy to assist them and answer their queries. Overall, I can say that attending this conference was a great opportunity for me as a graduate student motivated me to grow as a researcher and also prepare and plan appropriately for my career after I graduate. I am thankful to my advisor, Dr. Guijun Wang, and ODU's research facility for providing me the opportunity to participate in such a distinguished conference. I also want to thank ODU for considering me for the travel award so that I could learn and grow better.

-Pooja Sharma, PhD Candidate, Chemistry



PhD Students Pooja Sharma and Joedian Morris

Jenna Garcia—Provost’s Outstanding Undergraduate Researcher Award



Undergraduate student, Jenna Garcia, who conducts research with Dr. Craig Bayse, received the Provost’s Award for Outstanding Undergraduate Researcher. It is a highly competitive award and Jenna was one of two recipients for the 2018-2019 school year. Jenna was recognized for her outstanding research accomplishments in her research lab here at Old Dominion University in the Chemistry and Biochemistry Department.

Undergraduate Graduate Students Present at ABRCMS



Ms. Jennifer Mejia (right) was awarded a full travel Award from the American Society for Microbiology to present her research findings at the Annual Biomedical Research Conference for Minority Students (ABRCMS), Indianapolis, Indiana, November 14-17, 2018. Jennifer also won one of the two prizes awarded for the best oral presentation at ABRCMS. This is a first for any ODU undergraduate student attending any of the ABRCMS conferences.

Ms. Halie Maass (left) was awarded funding from ODU Honors College to present her research findings at the Annual Biomedical Research Conference for Minority Students (ABRCMS), Indianapolis, Indiana, November 14-17, 2018. Halie also won one of the two prizes awarded for the best oral presentation at ABRCMS. This was the first time that any ODU undergraduate students attended a ABRCMS conference.



Alumni News

Sarah Ofori

East Tennessee State Pharmacy School

I grew up in Grenada, an island in the Caribbean, before deciding to continue my education in the United States. I graduated from Old Dominion University with a Bachelor of Science in Biochemistry in May 2015. During my time at ODU, I was involved with the Caribbean Student Association, where I served as President. I was also a player on the ODU Club Lacrosse Team.

Science has always been my passion and it provides so many different career pathways. At the time, I knew the healthcare sector was my area of interest. I wanted to impact the lives of others so I thought the Biochemistry degree would provide me with the best knowledge base, as well as a chance to explore two major areas of science, wrapped into one. Additionally, the department offered students a great deal of support throughout their studies. My advisor was always accessible, as well as the department chair. Aside from scholastic duties, the department provided speakers, fun events and career advice.

I had a solid foundation at Old Dominion University, especially, with my core biochemistry classes, I remember learning the properties of the various amino acids there, and then applying the same knowledge during my first-year classes in pharmacy school. The senior seminar prepared me to break down and understand scientific studies and then transfer that knowledge to applicable projects as needed. The advanced laboratory courses gave me the skills to excel during many of the compounding classes and clinical rotations throughout pharmacy school. The senior seminar prepared me to break down and understand scientific studies and then transfer that knowledge to applicable projects as needed. The advanced laboratory courses gave me the skills to excel during many of the compounding classes and clinical rotations throughout pharmacy school.

Following my graduation from ODU, I enrolled in pharmacy school at East Tennessee State University in Johnson City, Tennessee. At ETSU, I have been involved with the Student National Pharmaceutical Association, where I have also served as President of the chapter. I have helped to raise awareness of several health conditions in the community through a series of health fairs, news channel interviews, and Naloxone reversal education sessions.



Alumni News

Anthony Childress

Post-doctoral fellow—Dept of Mechanical Engineering

Northeastern University

My favorite part about attending Old Dominion University was the people I met during my time there. I learned a lot about myself during those years from the small circle of friends I had established. I was also fortunate to know some older students who shared several of my chemistry courses. I cannot remember their names, but I do remember in mostly good terms the faces of the teaching assistants who instructed most of my lab courses.

I remember that I enjoyed the classes I took in the chemistry department. Several professors still stand out to me are Dr. Pinky McCoy who taught my very first chemistry course when I was a freshman, Jennifer Adamski who taught my organic chemistry lectures, Dr. John Donat who taught analytical chemistry lecture and lab, and Dr. John Cooper who taught the inorganic chemistry lecture and lab. The physical chemistry lab overseen by Dr. Ken Brown also stands out since it was the first time I was basically allowed to pursue the problems in whatever way I saw fit. I also had a chance to do some summer work with Dr. Jennifer Poutsma in the modelling of reaction pathways.



After graduating in December 2009, I briefly spent time in the Department of Materials Science and Engineering at Clemson University after it was suggested by Dr. Richard Gregory who I believe was the department chair at the time. I ultimately switched to the physics department at Clemson and worked under Dr. Apparao Rao doing research on nanomaterials in energy storage applications. I became well versed in the synthesis and analysis of carbon nanotubes, graphene, and various nanoparticles, and their integration into active materials for energy storage. I would regularly use Raman spectroscopy, FTIR, and electron microscopy to characterize my samples. I also relied on electrochemical methods for characterizing the performance of the batteries and capacitors that I fabricated. Electrochemistry did not stand out to me during my time at ODU, but I have since found it to be a very rich subject. The instruction and hands-on laboratory work at ODU had prepared me well for the daily tasks as a graduate student, even though I did not pursue my PhD in chemistry. In my mind, the fields of chemistry, materials science, and applied physics share much in common, often just using different phrases to describe the same phenomena. It's all atoms, fields, and thermo to me.

After earning my PhD in experimental physics, I spent some time continuing my work with Dr. Rao in a post-doctoral capacity. Several of the friends with whom I graduated were interested in industry positions and found jobs in the Bay area and Oregon. I have since moved from South Carolina to Boston, and am currently working as a postdoctoral fellow at Northeastern University with Dr. Ahmed Busnaina in the Department of Mechanical Engineering. I don't know anything about mechanical engineering. I am currently working to controllably assemble nanomaterials using electrochemical techniques similar to those mentioned above. In the future, I hope to continue research in the area of energy storage and generation at a national laboratory.

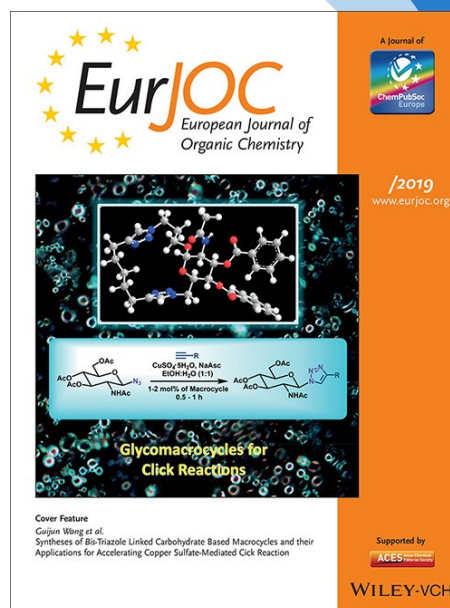
Graduate Student News

Dr. Guijun Wang's Group Featured on the Cover of EurJOC

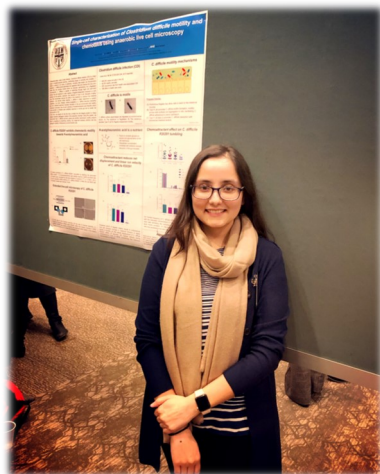
Group members from Dr. Guijun Wang's research lab published in the European Journal of Organic Chemistry in February 2019.

Group members included former Post-Doc Lalith Samankumara; recent PhD graduate Anji Chen; PhD students Sanjeeva Dodlapati; Dan Wang; Surya Adhikari and P.I. Dr. Guijun Wang.

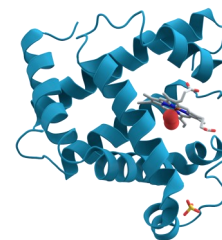
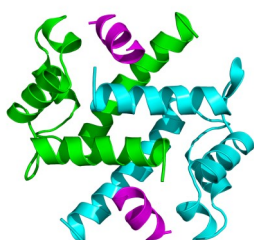
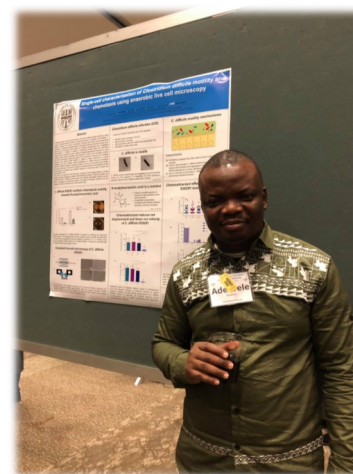
Their publication, *Syntheses of Bis-Triazole Linked Carbohydrate Based Macrocycles and Their Applications for Accelerating Copper Sulfate Mediated Click Reaction*, earned the distinction of being the cover feature in February 2019.



Dr. Purcell's Group Presented Posters



Dr. Erin Purcell's research group recently attended the 2019 Mid-Atlantic Pathogenesis Meeting. PhD students Astha Pokhrel (left) Adenrele Oludiran, (right) and Asia Poudel (below) presented posters and Dr. Purcell chaired a session.



Graduate Student News

Bruner Award

Ph.D. student, Oumar Sacko, (right) from Dr. Lee's group, was selected for the Bruner Award for the Best Student Paper in the Chemistry Section at the Virginia Academy of Science 96th Annual Meeting this past spring. Congratulations Oumar!



Van Norman Travel Grant Award

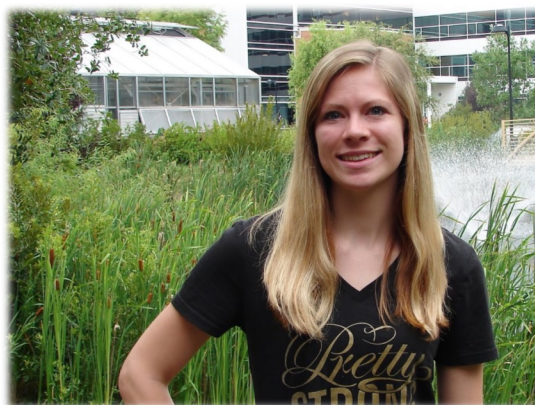
The Van Norman Graduate Travel Award provides support for two student in the Chemistry and Biochemistry PhD Program to present their research at a national or international conference. The award is meant to supplement the advisor's contribution for travel expenses. Two \$450 awards are given each year. The 2019-2020 Van Norman Travel Grant was awarded to Andrea Clark (top) and Ana Dreab (bottom)



Virginia Space Grant Consortium

Andrea Clark was awarded a grant from the Virginia Space Grant Consortium for 2019-2020.

This grant is a very competitive award which encourages STEM-related research, while recognizing high academic achievement. The students received a \$6,000 fellowship to support their research.



Congratulations to all of our graduates!
We wish you the best!



ODU
Class
of 2019

