

## CHEMISTRY WELCOMES NEW FACULTY MEMBER DR. CARLOS GARCIA

Dr. Carlos Garcia is the newest addition to our program and joined the Department of Chemistry in August of 2015. Dr. Garcia's

research lies at the interface between microfluidics and nanomaterials and is focused on the development of

novel analytical strategies to

determine biomedically-relevant molecules. Dr. Garcia's group will continue

investigating the driving forces and consequences

of the interaction of proteins with nanostructured surfaces and in particular, under the influence of electrical stimulation. Students in his group will also have the opportunity to combine advanced microfabrication techniques, separation science, and detection strategies to produce the next generation of microfluidic devices. Dr. Garcia earned a B.S. in Biochemistry (1996) and Ph.D. in Chemistry (2001) from the National University of Cordoba (Argentina). He performed postdoctoral studies at Mississippi State University and Colorado State University under the supervision of Dr. W. Wilson and Dr. Charles Henry, respectively. He started his independent career at UT San Antonio, where he reached the rank of Professor in 2014. Dr. Garcia has published more than 70 peer-reviewed articles and his research has been funded by NIH, NSF, NASA, and the Office of Naval Research. Dr. Garcia moved to Clemson accompanied by his wife (Mariela) and two children (Ainara and Lukas).



## Message from the Chair

I hope that your spirits have been refreshed and renewed by the arrival of Spring. This is the season that brings forth budding hopes and promises of rejuvenation and new growth even though T. S. Eliot tells us "April is the cruelest month, ... mixing memory and desire".

The faculty's hard work over the years has blossomed into a number of awards. The New England Regional Section of the Society for Applied Spectroscopy announced that Professor Ken Marcus will receive the 2015 Lester W. Strock Award at its national meeting in September for "the development of the liquid sampling-atmospheric pressure glow discharge ionization source". Professor Emeritus Dwaine Eubanks was awarded the George C. Pimentel Award in Chemical Education for his work as director of the ACS Examinations Institute and his work in developing textbooks, testing and assessment tools, and his promotion of chemical education. Professor Joe Kolis received the 2015 Alumni Award for Outstanding Achievement in Research for his outstanding work in inorganic chemistry. Dr. Jacob Schroeder received the 2015 CoES Award of Excellence for Teaching in the Sciences. Professor Julia Brumaghim has been promoted to full Professor and is planning a sabbatical for Spring 2016.

The ever-changing face of the faculty continues. Professor Ken Christensen will be leaving in June for Utah where he has accepted a position at Brigham Young University that will provide opportunities to expand the biological component of his research and be closer to family. A successful search has been completed and Professor Carlos Garcia will be joining the faculty in August as an analytical chemist and space in Hunter is being renovated for his research program. With Dr. Karen Pressprich resigning for new opportunities on the West Coast and Dr. Ken Rillings



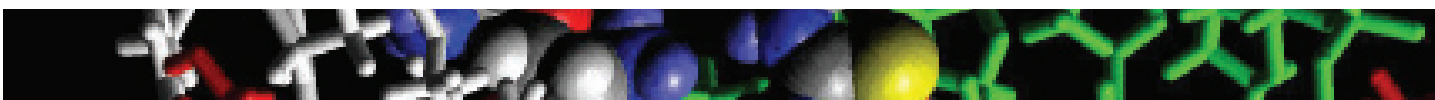
retiring, the department is in the midst of a search for two new instructors.

In August 2014, the department held a retreat to develop a new strategic plan and a re-examination of both the undergraduate and graduate programs in chemistry was conducted during the current academic year. Considerable progress has been made in revising the undergraduate curriculum and the graduate program remains a work in progress. The university has undertaken an institutional analysis of the college structure and it remains to be seen whether chemistry will be part of a new College of Sciences or remain a member department of the College of Engineering and Science.

It has been a flowering spring with the recognition of our faculty through the awards mentioned above and the winning of new grant contracts and awards and I am delighted to share the news with you. As always we are most appreciative of our alumni and friends and your loyal support and we all wish you a safe and enjoyable summer.

R. KARL DIETER, CHAIR

*R. Karl Dieter*



### EUBANKS RECEIVES NATIONAL AMERICAN CHEMICAL SOCIETY AWARD

The 2015 winner of the George C. Pimentel Award in Chemical Education is the Chemistry Department's own **Professor Emeritus Dwaine Eubanks**. This award in chemical education is



the oldest and most prestigious ACS award that recognizes contributions to chemical education. The first award was presented in 1952, with the legendary Joel Hildebrand of

the University of California at Berkeley named as the winner. Since then, recipients have included many outstanding chemistry educators, including Nobel Prize winners Glenn Seaborg and Roald Hoffmann.

Dr. Eubanks was presented the award during the ACS spring national meeting in Denver. The award citation reads, "For insightful leadership in enhancing secondary- and tertiary-level chemistry instruction, particularly in developing innovative curricula and in generating high-quality, nationally implemented chemistry assessment instruments." Also in Denver, a day-long symposium, titled "From Sputnik to Smartphones: A Half-Century of Chemistry Education" was organized in his honor, and concluded with his Award Address. The 17 papers in the Symposium are to be published as a book in the ACS Symposium series. Eubanks is also a Fellow of the American Chemical Society and co-recipient (with his wife, Lucy) of the first Outstanding Service Award presented by the ACS Division of Chemical Education.



### KOLIS RECEIVES 2015 ALUMNI AWARD FOR OUTSTANDING ACHIEVEMENT IN RESEARCH

The 2015 Alumni Award for Outstanding Achievement in Research was presented to our own **Professor Joseph Kolis**, Professor of Inorganic Chemistry, by Wil Brasington, director of alumni relations, at the spring 2015 University Faculty Meeting. The award is presented annually to a tenure / tenure-track member of the Clemson faculty in recognition of that person's research accomplishments. Joe is recognized for his research in the general area of solid-state inorganic chemistry with special attention to new ways of growing high-quality and unusual crystalline materials. He has published over 200 peer-reviewed journal articles and is inventor or co-inventor on 14 patents or patent applications that are pending, and has raised over \$11 million in extramural research funding to support research activities in his group. He is also an excellent teacher and has served Clemson and the inorganic chemistry community in many ways including a term on the editorial board of the journal *Inorganic Chemistry* and a term as chair of the solid state sub-division of the inorganic division of ACS. Congratulations Joe!

### GRADUATIONS MAY, 2015

**PHD**  
Sheng Lin  
Fenglin Wang

**Masters**  
Zhixin Chen  
Yu Shen

**BA**  
Kathryn Daugherty  
Daniel Gaines  
Eric Hall  
Jamora Hamilton  
Brandon Loren  
Eric McGuirk  
Haydan Smith  
Kayleigh Wall

**BS**  
Justin Chiles  
Erina Hoshi  
Ashlynn Lawrence  
Corinne McGill  
Alexander Nortz  
Brandyn Orr  
Grayson Panetti  
Emily Turner  
Charles Williams

**CONGRATULATIONS to all our 2014 and 2015 graduates!**

### KEN MARCUS TO RECEIVE THE 2015 LESTER W. STROCK AWARD

CONGRATULATIONS TO **KEN MARCUS** WHO HAS BEEN SELECTED TO RECEIVE THE 2015 LESTER W. STROCK AWARD IN RECOGNITION OF HIS RESEARCH AND PUBLICATIONS ON THE DEVELOPMENT OF THE LIQUID SAMPLING-ATMOSPHERIC PRESSURE GLOW DISCHARGE (LS-



APGD) IONIZATION SOURCE. THIS AWARD IS GIVEN ON BEHALF OF THE SOCIETY FOR APPLIED SPECTROSCOPY AND THE SAS NEW ENGLAND REGIONAL SECTION AND WILL BE FORMALLY PRESENTED TO DR. MARCUS AT SAS'S NATIONAL MEETING SciX 2015 IN PROVIDENCE, RI ON SEPTEMBER 29, 2015. THE LESTER W. STROCK AWARDEE IS ALSO GIVEN A PLENARY LECTURE AT THE SciX MEETING AND A SYMPOSIUM WILL BE ORGANIZED IN HONOR OF HIS ACCOMPLISHMENTS. THE DEVELOPMENT OF THE LS-APGD SOURCE HAS BEEN FUNDED BY THE DEFENSE THREAT REDUCTION AGENCY (DTRA), THE NATIONAL NUCLEAR SECURITY AGENCY (NNSA) THROUGH THE PACIFIC NORTHWEST NATIONAL LABORATORY, AND THE SAVANNAH

RIVER NATIONAL LABORATORY.



## HONORS AND AWARDS DAY, APRIL 4, 2015

The Department of Chemistry Honors and Awards Day Luncheon was held on April 4, 2015, at the Clemson University Outdoor Lab-Kresge Hall. The following awards were presented at that time:

- Senior Research Award - Catherine Conrad
- Chemistry Faculty Award - Kayleigh Wall
- American Institute of Chemists Award - Anna Rollings
- American Chemical Society Award - Jacqueline Schiller
- Merck Index Award - Trey Williams
- Houghton Mifflin/ICUC First Year Chemistry Award - Kristopher Gross
- Chemical Rubber Company Award - Kristyn Robinson
- Outstanding Student in General Chemistry - Sara Garbowski
- Outstanding Student in Introductory Chemistry - Rachael Villeneuve
- Outstanding Student in Organic Chemistry - Jacqueline Rohde
- Outstanding Sophomore Chemistry Major - Rebecca Pontius
- Undergraduate Award in Analytical Chemistry - Balakrishnan Pillai
- Undergraduate Award in Inorganic Chemistry - Bridget Luckie
- Undergraduate Award in Organic Chemistry - Cameron Weekley
- Western Carolinas Section ACS Award for Outstanding Chemistry Senior - Grayson Panetti
- Graduate Teaching Assistant Award - Sabina Maskey and Heeren Gordhan
- Outstanding Graduate Researcher Award - Sarah Hill and Yamin Htet
- Mark Bernhard Hardin Prize in Chemistry - Morgan Norton
- Warwick Chemical Foundation Prize in Chemistry - Garrett Gotthelf



Sarah Hill



Megan Norton

## GRADUATIONS DECEMBER, 2014

### PhD

Naresh Chandra Osti  
Sushant Prabhakar Sahu  
Abby J. Schadock-Hewit  
Matthew T. Zimmerman

### BA/BS

Olivia Michelle Palmquist  
Pooja Laxeshkumar Patel  
Rachel Nicole Pope  
William Allen Silvers

## STUDENTS

**Garret Gotthelf**, a senior Chemistry major from Mountain Lakes, New Jersey, and student of



William Pennington Jr., won a first place award in the chemistry division for his presentation at the South Carolina Academy of Sciences meeting which was held on April 11th at Furman University. The title of Garret's talk was, "Reversible Thermochromism in Polydiacetylenes," and it described research he is performing in the Pennington lab.

## CGSO News

The CGSO held their spring banquet on April 22 at 356 in downtown Clemson. Lots of food, drink and good times were



enjoyed by the students – not to mention plenty of door prizes. **Sarah Hill**, representing Dr. Pennington and the Inorganic Section



was the winner of the goldfish races. **Lynn Zhang**

won the T-shirt design competition and the CGSO March Madness Bracket was won by **Cameron Parrish**. New officers are **Tim Lex**, President; **Jamie Shetzline**, VP; **Edward Hoegg**, Treasurer; and **Kristin Sockwell**, Secretary.

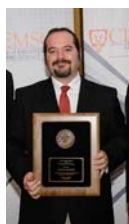


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## MORE FACULTY HONORS

THE DEPARTMENT OF CHEMISTRY IS VERY PROUD TO ANNOUNCE THAT **DR. JACOB SCHROEDER** WAS HONORED ON MAY 7TH, AT A CEREMONY IN GREENVILLE, WITH THE 2015 COLLEGE OF ENGINEERING AND SCIENCE AWARD OF EXCELLENCE FOR TEACHING IN THE SCIENCES. DR. SCHROEDER WAS SPECIFICALLY RECOGNIZED BY THE COLLEGE FOR HIS REMARKABLE AND SUCCESSFUL APPROACH IN TEACHING ORGANIC CHEMISTRY, A MOST CHALLENGING SUBJECT FOR MANY UNDERGRADUATES. JACOB INVESTS AN ENORMOUS AMOUNT OF TIME, ENERGY, AND THOUGHT INTO ENSURING THAT EVERY ONE OF THE 300 STUDENTS IN HIS CLASS HAS THE OPPORTUNITY TO LEARN THE FUNDAMENTALS OF THIS DIFFICULT SUBJECT. THESE EFFORTS INCLUDE PERSONALIZED FEEDBACK ON 300 WEEKLY ASSIGNMENTS, AND SYSTEMATIC



ANALYSES OF THESE ASSIGNMENTS TO IDENTIFY PERVERSIVE MISCONCEPTIONS THAT CAN BE ADDRESSED IN CLASS. BASED ON STUDENT FEEDBACK, DR. SCHROEDER'S STUDENTS FIND HIS OBVIOUS LOVE FOR ORGANIC CHEMISTRY TO BE CONTAGIOUS, DESPITE (IN SOME CASES) THEIR EARLIER MISGIVINGS ABOUT THE SUBJECT. DUE TO HIS INNOVATIVE AND SYSTEMATIC TEACHING APPROACH, AS WELL AS HIS ABILITY TO CONVEY NOT ONLY AN UNDERSTANDING OF, BUT ALSO AN EXCITEMENT FOR ORGANIC CHEMISTRY, DR. SCHROEDER IS CLEARLY DESERVING OF THIS PRESTIGIOUS AWARD AND THE RECOGNITION IT SYMBOLIZES.



**BRIAN DOMINY**, ASSOCIATE PROFESSOR IN PHYSICAL CHEMISTRY, NOW IN HIS TENTH YEAR AT CLEMSON, HAS RECENTLY BEEN CHOSEN TO SERVE AS CHAIR OF THE COLLEGE OF ENGINEERING & SCIENCES CURRICULUM COMMITTEE. FOR THE NEXT THREE YEARS, BRIAN WILL BE LEADING THE COMMITTEE THAT APPROVES, AT THE COLLEGE LEVEL, NEW ENGINEERING AND SCIENCE COURSES, REVISIONS TO CURRICULA AND OTHER RELATED BUSINESS. IN ADDITION TO LEADING THIS COMMITTEE, BRIAN WILL SERVE AS A MEMBER OF THE UNIVERSITY CURRICULUM COMMITTEE WHICH HAS FINAL APPROVAL ON ALL CURRICULUM MATTERS. THESE NEW RESPONSIBILITIES FIT NICELY WITH BRIAN'S CURRENT ROLE AS DIRECTOR OF THE UNDERGRADUATE PROGRAM FOR THE CHEMISTRY DEPARTMENT.

Comments? We would love to hear from you. Please email your comments or questions to Mary Standeffer at [standem@clermson.edu](mailto:standem@clermson.edu) and be sure to visit us on the Web at [chemistry.clemson.edu](http://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!