Alumni Awards

Together with the Friends of Chemistry, the Department of Chemistry is excited to initiate a new alumni award program, to recognize the outstanding accomplishments of WFU graduates. In alternating years, the department will call for nominations for the **WFU CHEMISTRY RECENT ALUMNI AWARD** and the **WFU CHEMISTRY DISTINGUISHED ALUMNI AWARD**, beginning with the latter in this inaugural year.

The **WFU CHEMISTRY DISTINGUISHED ALUMNI AWARD** will honor the preeminent contributions and service of a WFU alumnus to the advancement of any facet of the chemical sciences. Nominees will have a sustained and enduring record of achievement, recognized nationally or internationally and exemplifying WFU’s commitment to excellence. The awardee will be invited to receive their honorary award in person at the WFU Chemistry Department Homecoming Reception (to be held on September 20, 2014).

Nominations shall be submitted online by completing the form for the WFU Chemistry Distinguished Alumni Award available at https://wakeforest.qualtrics.com/SE/?SID=SV_eh8yjPdpscYR4W1. Self-nominations are also welcome. Award selection will be made by members of the Chemistry Department and the Friends of Chemistry steering committee (active members of which are ineligible to receive the award) after careful review of all nominations received by the **deadline of July 15, 2014**. Award selection will take into consideration: (i) contributions to the advancement of the chemical sciences and/or the nominee’s profession; (ii) outstanding public engagement, service to the community, the profession or the institution, and/or promotion of the STEM fields; (iii) noteworthy advances in chemical education and/or mentorship; and/or (iv) leadership roles enhancing academic or industrial programs, resources or infrastructure. Nominations will be kept on file and will be eligible for reconsideration for a period of three years. For more information, contact the incoming Chemistry Department Chair (Mark Welker, 336-758-5758, welker@wfu.edu)
Condolances

by Willie Hinze

We sadly report the passing of the following friends.

LeRoy Allen (1945, BS) passed away on March 7, 2012. He earned his MD (1947) from Bowman Gray School of Medicine and after completing a surgical residency, he served in the Korean War as a U.S. Naval Officer. He then undertook neurological training at West Virginia University before establishing the Raleigh Neurosurgical Clinic where he practiced for nearly 40 years before retiring in 1993, several months before his 70th birthday so that he could pursue fishing and boating.

Walter S. Lockhart, Jr. (BS, 1941) died on September 22, 2012. After receiving his MD (1944) from Bowman Gray School of Medicine, he completed his internship and residency at NC Baptist Hospital and Yale’s New Haven Hospital. After service in the US Army as a Medical Officer for four years, he practiced neurosurgery at Watts and Durham Regional Hospitals for 23 years in addition to also serving for 4 years as an Associate Professor of Neurosurgery at the University of Miami School of Medicine. He was elected president of the NC Neurosurgical Society in 1979. He retired in 1986.

Robert L. Mitchell (1950, BS) died on March 31, 2011. After graduation from Wake, he began a lifelong career with Weyerhaeuser serving at their locations in OK and OR. He was responsible for opening their plant in Idabel, OK. He retired from Weyerhaeuser after 41 years of service in 1991 at which time he held the title Pulp and Paper Production Manager.

Paul M. Gross, Jr., Professor Emeritus of Chemistry, died on March 17, 2011. He received his BS degree in chemistry from Duke University in 1941 and his PhD in chemistry from Brown University in 1948. He taught for several years at the University of Virginia and was a teaching fellow at Cambridge University. In 1959, he joined the chemistry faculty at Wake Forest where he taught general and physical chemistry courses. He also taught oceanography and for almost 20 years served as the Coordinator of the University’s Interdisciplinary Honors program. He retired as Professor of Chemistry in 1987. He was an advocate for research at both the graduate and undergraduate levels and understood the value of the synergies that came from research and how it enhanced undergraduate education [taken from: http://inside.wfu.edu/2011/03/retired-chemistry-professor-gross-dies/].

Friends of Chemistry

by Erin Sommers

Friends of Chemistry (FoC) has lived up to its moniker, supporting the WFU Chemistry Department and its students. FoC was formed in 2009 “to contribute to the well-being of the Chemistry Department and its students by participating in an ongoing discussion about sustaining and developing the department while helping to execute specific tasks in support of the department.” Since its inception, FoC has become not only a friend to the department but also its advocate, introducing new programs and generating buzz among alumni.

A Steering Committee governs FoC and is currently headed by Keith McDowell, a 1966 graduate of Wake, and retired professor of chemistry. Five other members from various chemistry sectors round out the current Steering Committee: Alexander Kheradi (non-lethal weaponry and aerospace medicine), Roy Ware (drug candidate development), L. Van-Thomas Crisco (cardiologist), Jim Harton (chemical industry), and Erin Sommers (IP attorney). The committee meets via teleconference.

Every year, Homecoming weekend showcases some of FoC’s most public activities. FoC hosts a Friday evening dinner, giving an opportunity to alumni to catch up with each other and their former professors. During Homecoming 2013, FoC also sponsored a career panel for current students focused on the pharmaceutical industry and included participants both live and via Webex. This year FoC plans to host a similar panel geared towards chemistry careers in the government sector. FoC’s Homecoming activities culminate with the Deacon Demo Show and last year the physics and biology departments joined in. We learned about friction, tail-flip behavior, teaching genetics with dogs, and—not to be outdone—pyrotechnics with the Demon Deacon.

(Watch part of last year’s demo show at https://www.youtube.com/watch?v=57dLxVMvEL8).

But it is FoC’s quieter, less “explosive” activities that truly support the department and its students. FoC initiated a mentoring program, connecting current students to FoC members who provide general guidance and specific career advice. Over 25 students have been matched with mentors, and many of those students have gone on to graduate or professional schools.

FoC is also instituting two career alumni awards—a Distinguished Alumni Award and a Recent Alumni Award. The awards will rotate years, and this year FoC is accepting nominations for a distinguished alumnus who has made significant contributions to the advancement of the chemical sciences. (Details on p. 1) These awards will highlight the longstanding excellence of Wake’s chemistry department and the high quality of students it educates.

FoC established its very own Linkedin® page and its own website, which includes a “Where Are They Now?” section that spotlights a Wake chemistry grad and archives past interviews. This feature gives current students with a real-world perspective of what a degree in chemistry from Wake can lead to, and alumni an idea what their classmates are up to. FoC has created a far-reaching yet close-knit community of alumni whose sole aim is support the department who championed us.

Join us. FoC membership is open to any WFU alumn who obtained a degree from the Department of Chemistry. Check out FoC’s website to become a member. FoC is also looking for two new members to fill Steering Committee positions that will open up this fall at Homecoming. Please contact FoC (foC@wfu.edu) if you are interested in being a member of the Steering Committee.
Noftle Retires

The Chemistry Department and Wake Forest University have been the beneficiaries of Dr. Ron Noftle’s outstanding teaching, research, and service for 47 years, since his appointment as a faculty member in 1967. We join Ron in celebrating his retirement and transition to the role of Professor Emeritus, in which he will continue to mentor undergraduate research and contribute to the department’s academic mission.

Ron earned his B.S. in 1961 from the University of New Hampshire and his Ph.D. in 1966 from the University of Washington. He completed a Postdoctoral Fellowship at the University of Idaho with J.M. Shreeve before joining the faculty at Wake Forest University in 1967. Ron has also served as a Visiting Scientist at the U.S. Naval Research Laboratory (1975-76); as a Reynolds Research Leave fellow at the University of Southampton, England (1986 & 1995); and as a Reynolds Research Leave fellow at Los Alamos National Laboratory (2003). These rich and varied research experiences benefitted Ron’s research and teaching, along with his mentoring of numerous graduate and undergraduate students throughout his career, for which he was recently awarded “Senior Scientist Mentor” by the Camille and Henry Dreyfus Foundation. In his true teacher-scholar fashion, Dr. Noftle blended a successful career of scholarly research in the fields of fluorine, inorganic, and materials chemistry with the recent development of a materials chemistry track for undergraduate students at Wake Forest, and on top of it all, Ron served as an able administrator as Chairman of the Chemistry Department, Chairman of the Central North Carolina Section of the ACS, and of the ACS Division of Fluorine Chemistry.

Friends, family and colleagues got together at Ron’s recent retirement reception on May 01, 2014 in Reynolda Hall to wish him well for the next phase of his personal and academic pursuits. We are grateful for Ron’s many contributions to the Chemistry Department and Wake Forest, and we look forward to his many contributions still to come as Professor Emeritus.

From Our Incoming Department Chair

Let me first say thanks for your interest in our Department. I have been at Wake Forest for almost 30 years now and it has been a great place for me. My hope is that your experiences here were also rewarding, and part of my job is to make sure that continues into the future. I start my term as chair with a huge note of thanks to our outgoing chair, Christa Colyer. Christa knows I think she works way too hard and I can tell you she does this because she loves our students. I do also, but I have to sleep sometimes, and I’m not sure Christa has slept much over these last 8 years!

Since I have 9 years of experience from working in our Provost’s Office I try to think big picture when I start something so let me start with some trends in Higher Education, Government, and Industry that will affect our future Chemistry graduates.

- There will be more scrutiny of degree and curricular relevance, i.e. applied science vs. pure science. The balance between learning for the sake of learning and learning for vocation is a difficult one. We will continue to educate students who can read, write and speak well, but I would like to see us put more emphasis on educating students who can solve applied science problems in team settings.
- The ability to work across disciplines and across cultures in team settings will continue to be valued more and more. This means we will need more interdisciplinary experiences and more international experiences for our graduates.
- The Bureau of Labor Statistics now projects that our graduates will average 12-15 jobs over their lifetimes. This trend means increased emphasis on creativity and flexibility in course work

Newly Established Harton Scholarship

The Department of Chemistry is honored to have received generous funding from chemical industry leader Jim Harton (WFU/’74) and his wife, Courtenay Harton, to establish the Harton Scholarship for Chemical Industry. The scholarship is valued at $5000 and will be awarded each spring to a newly declared chemistry major who is intent on exploring career opportunities in the American chemical industry with a possible renewal for the senior year. The flexibility/networking issues for our goal of this scholarship is to contribute to the future success of the American chemical industry by providing financial support to chemistry majors who demonstrate the potential and motivation to develop into future leaders in the chemical industry. Mr. Harton wishes to honor the positive impact that his business mentors have had on his 40 year career in the chemical industry, including Mr. Jonathan P. Rogers, Mr. Thomas M. Dille, Mr. Charles W. Jongeward, and Mr. Claude Callou.
New Hires Join the Department

by Christa Colyer

Chemistry is excited to welcome two new tenure-track faculty members who will join the department this fall, in addition to a new lecturer who started Fall 2013. All three bring teaching experience and research expertise that will help to advance the department’s mission, and we look forward to working with them.

Scott Geyer earned his B.S. in Chemical Physics from the University of Virginia (2005) and his Ph.D. in Physical Chemistry from the Massachusetts Institute of Technology (2010). Scott worked as a Postdoctoral Scientist in Chemical Engineering at Stanford University (2011-13) and as Laboratory Instructor at Appalachian State University (2013-14). It is Dr. Geyer’s goal to demonstrate to students that physical chemistry is at the forefront of many research areas, and to help students connect their classroom study to scientific discovery. Broadly speaking, Scott’s research will focus on nanotechnology. When the dimensions of a material are limited to the nanoscale, quantum confinement can dramatically alter properties relative to the bulk material. For colloidal quantum dots (QD), controlling the particle size will allow for the creation of bright, wavelength tune-able emitters and absorbers spanning the infrared, visible and ultraviolet regions. The use of QDs in novel opto-electronic devices and solar cells will be pursued in the Geyer lab by developing an all inorganic system consisting of QDs embedded in a semiconductor matrix. His research group at Wake Forest will focus on both understanding the electronic properties of QD based devices and applying QDs for novel optical applications in the visible and infrared spectrum.

Mike Gross earned his B.S. in Chemical Engineering from Bucknell University; and his M.S. & Ph.D. in Chemical & Biomolecular Engineering from the University of Pennsylvania, before returning to Bucknell as a faculty member (2007-present). Mike has been at Wake Forest during the past two years, as Visiting Scholar in the Chemistry Department and the Center for Energy, Environment, and Sustainability. Dr. Gross’ professional experience thus far epitomizes the teacher-scholar model, with interdisciplinary interests in both teaching and research spanning three areas of focus. First, the Gross lab studies ceramic materials, particularly mixed metal oxides, for electrochemical energy conversion applications. This research includes synthesis, structural characterization, and measurement of transport properties. Second, the Gross lab will develop multifunctional ceramic composites for solid oxide fuel cell electrodes, including: computer modeling to simulate nanostructured composite morphologies and prediction of the resulting electrode properties, experimental synthesis and fabrication of predicted optimal composite systems, and performance testing of prototype devices. Finally, Mike and his lab will continue to study activity-level, or situational, student motivation in STEM courses, ultimately identifying specific ways in which instructors can positively influence their students’ motivational responses in the classroom.

David Wren earned his B.S. in Chemistry from the University of California, Davis and his M.S. in Biochemistry from the University of Colorado, Boulder. David then earned his Ph.D. in Chemical Education from the University of Northern Colorado, where his doctoral research focused on the design, development and psychometric evaluation of testing instruments used in both formative and summative assessment in general chemistry. With a dual appointment as an assistant teaching professor and Director of the Chemistry Center, David joined our department in 2013 and is excited to use his research background both in the classroom and in development and psychometric evaluation of testing instruments used in both formative and summative assessment in general chemistry. With a dual appointment as an assistant teaching professor and Director of the Chemistry Center, David joined our department in 2013 and is excited to use his research background both in the classroom and in development and psychometric evaluation of testing instruments used in both formative and summative assessment in general chemistry. With a dual appointment as an assistant teaching professor and Director of the Chemistry Center, David joined our department in 2013 and is excited to use his research background both in the classroom and in development and psychometric evaluation of testing instruments used in both formative and summative assessment in general chemistry. With a dual appointment as an assistant teaching professor and Director of the Chemistry Center, David joined our department in 2013 and is excited to use his research background both in the classroom and in development and psychometric evaluation of testing instruments used in both formative and summative assessment in general chemistry. With a dual appointment as an assistant teaching professor and Director of the Chemistry Center, David joined our department in 2013 and is excited to use his research background both in the classroom and in development and psychometric evaluation of testing instruments used in both formative and summative assessment in general chemistry.

The Chemistry Center’s mission is to provide a positive space where students can interact with chemistry course material in unique and meaningful ways. The Chemistry Center is more than just a tutoring center, but a space were students have access to resources and trained instructors within the walls of the Chemistry Department. The Chemistry Center is a place where instructors (both graduate and undergraduate) learn to teach and chemistry students learn how to learn. Dr. Wren hopes to develop a program where instructors learn teaching techniques and gain insight on the difficulties of learning chemistry using current Chemical Education literature and theory. In addition, the Chemistry Center will provide targeted support to students learning historically difficult topics in general and organic chemistry.

Dr. Scott Geyer

Dr. Geyer’s research at Wake Forest will focus on electronic properties of quantum dots and their optical applications, and his teaching will be primarily in physical chemistry offerings.

Dr. Mike Gross

Dr. Gross’ lab will study metal oxide ceramics for electrochemical energy conversions and ceramic composites for fuel cell applications.

Dr. David Wren

Dr. Wren directs the Chemistry Center and serves as Assistant Teaching Professor.