From the Department Head

The words “fun, informative, and exciting” best describe the prospective students’ experience during the 2011 Research Open House held by the Chemistry Department on March 5 in Buehler Hall.

28 prospective students from all over the country participated in this 2-day event. This year’s Open House consisted of faculty poster sessions, an overview of Ph.D programs, a facilities tour, graduate student presentations, 1-on-1 meetings, a grad students discussion panel and many social events such as a dinner banquet at the Neyland Stadium Skybox and an Association of Chemistry Graduate Students (ACGS) social at a local restaurant. Many prospective students were surprised by how much information they obtained during this visit and described it as a “good life experience”.

Besides prospective students, 30 current graduate students also enjoyed themselves as hosts. “I had a great time at the research open house. One of the highlights was meeting the new prospective students and learning about their chemistry background. I am excited to see who we persuaded to join the graduate program here in Knoxville, TN” said Adam Imel, graduate student and current ACGS Recruiting Chair.

15 faculty members also took part in the event and described their meetings with students as not only beneficial but also inspiring. “This is a brilliant group of students, and I really enjoyed my meetings with them.” Dr. Compton said.

All of the prospective students that participated received offers from the Department. “It is our hope that after meeting our faculty members and students, they would find UT Chemistry a good fit for them” Rachel Rui, the Recruiting Coordinator said. “This Open House is not only a tool to showcase our faculty and students’ research projects, but also an opportunity for prospective students to become acquainted with people inside the Department before making their decisions. After all, it’s people that define a place.”

Welcome back to the chemistry department at UTK. We have had both a productive and eventful year in the department. A new junior faculty member will join us in the fall as the result of a search that was initiated at the beginning of this past academic year. Two of our existing junior faculty came up for tenure this fall and, barring any surprises, both will join the ranks of associate professors by the end of the summer. A number of our junior faculty have been very successful this past year in getting signature papers accepted for publication as well as getting funding for their research programs. Finally, we just acquired a new state-of-the-art powder diffractometer to help support several materials research programs in the department. But most exciting to me is the news that we will be bringing in one of the largest and strongest graduate classes ever this fall - 32 new students to help grow the many new research programs in the department. The number of graduate students (and GRA appointments!) is at a record high in the department currently and we hope to increase our numbers even more. So things are looking up as we begin summer research.

My final thought in this note is to say goodbye to everyone as head of department. As most know, I am stepping down after eight years at the helm. It’s been good as head; opened my eyes to many things. But I am eager to get back to my research program full time as well as teaching. I want to thank you for your support during my tenure as head and urge you to continue to stay connected with and support the department.
March 22 marked my first year anniversary of joining the Department. It has truly been an educational, productive, enlightening and above all, exciting year for me. Exciting not only because of the changes and events that happened, but also because of the many improvements and opportunities I see ahead of us in terms of branding UT Chemistry. This past year, we successfully held the Board of Visitors Annual meeting and made ourselves some new year resolutions; we met a group of brilliant young chemists during our 2011 Research Open House and are expecting some of them to join us as part of our 2011 Fall class.

Moreover, I would like to draw your attention to some updates on our website. For faculty members, 6 new research group websites were updated or created to bring you the most up-to-date information about these faculty members, their research projects and group members. For alumni and friends, we finally unveiled the long-awaited Board of Visitors website, listed the charter, history of the Board and current Board Members. Alumni can also update their information or request a visit by filling out an online form. For potential students, they now can request a campus visit and schedule meetings with faculty members online. If a private visit is not feasible, they also have the option to request a graduate program information package sent to their address. For current graduate students, the Association of Chemistry Graduate Students (ACGS) now has their own website that all students can go to and check out the events; apply for travel and graduation awards.

A lot of efforts from faculty, students and staff were put in to gather information and create these websites. I hope you find them informative and please do not hesitate to send your suggestions and comments to me through email: jrui@ion.chem.utk.edu. Last but not least, enjoy this issue.

Sheng Dai
Dr. Sheng Dai joined the faculty in Fall 2010 as a Professor of Inorganic & Analytical Chemistry. Dai received his B.S. (1984) and M.S. (1986) degrees from Zhejiang University in China and then obtained a Ph.D. (1990) from the University of Tennessee, Knoxville. He currently holds a Joint Faculty Appointment between ORNL and UTK and serves as the Group Leader of the Nanomaterials Chemistry Group, Chemical Sciences Division at Oak Ridge National Laboratory.

His research interests include porous materials, ionic liquids, catalysis, separation, energy storage, and radiation sensors.

New X-Ray

The Department recently acquired a new powder X-ray diffractometer called Empyrean. Sold by a company named Panalytical, this model is brand new and only out on the market for less than a year. “This machine is one of the first ones delivered to a US university” said Dr. David Jenkins, assistant professor and faculty supervisor of Empyrean.

Empyrean is a multi-purpose research diffractometer that introduces the world’s first 3D detection system, PXcel3D. Users can switch between...
Awards and Recognitions

April, 2011
- Feigerle, Charles; Rack, Philip - Development of a Thin-Film Boron Phosphide Solid-State Neutron Detector - National Nuclear Security Administration - $250,000
- Mays, Jimmy - Polymer-Based Multicomponent Materials - DOE - UT-Battelle - ORNL - $22,895

March, 2011
- Dadmun, Mark - Support of Postdoc/Grad Student for Dr. Mark Dadmun - DOE - UT-Battelle - ORNL - $55,000
- Mays, Jimmy - Polymer-Based Multicomponent Materials - DOE - UT-Battelle - ORNL - $30,000
- Mays, Jimmy - Stimuli Responsive Self-Assembled Single-Walled Carbon Nanotube Gels - DOD - Department of the Army - $50,000
- Mays, Jimmy - Polymer-Based Multicomponent Materials - DOE - UT-Battelle - ORNL - $23,878

For previous awards, please go to http://www.chem.utk.edu/awards.html.

Coming Up in Next Issue:

Brian Long, Ph.D UT Austin (2009), will join the Department as assistant professor in fall 2011 and bring many exciting research projects such as designing and synthesizing organic photovoltaic materials used for solar devices.

Michael Best and Frank Vogt, two assistant professors will join the ranks of associate professors by the end of this summer.

Shawn Campagna, assistant professor unveils his signature publication in “Cell”.

Curriculum Changes
- New Candidacy System
- General Chemistry Lab.

NewX-Ray continued from page 2

Spring 2011, two renowned Professors Paul Bohn, the Department of Chemical and Biomolecular Engineering at the University of Notre Dame and John Yates, the Department of Chemistry at the University of Virginia were invited to give seminar talks at the Department as part of the Haines-Morris student led seminar series.

The Haines-Morris student led seminar series is based around generating a greater level of student involvement in the seminars and with the speakers. The initial idea came from Professor Camden based on his experiences as a graduate student at the Stanford University.

The funding for the series came from three sources – the Chemistry department, The Association of Chemistry Graduate Students (ACGS), and an intra-university grant known as the Haines-Morris grant which is devoted to bringing in high quality speakers in the Arts and sciences. The grant application was prepared and written by professors Kilbey, Camden and ACGS Faculty/Student Interaction Committee Chair Jon Horton in Fall 2010.

The speakers were nominated, chosen, invited, and hosted by graduate students. Additionally the main interaction of the speakers throughout the course of their visit was with students.

“This series should benefit both the chemistry department and the university as a whole through meaningful interaction for students with outside faculty and the intrinsic creative value of their research as a spark of inspiration for research within the university”. Horton said.

The speakers chosen are frequently involved in multi-disciplinary research and it is the hope that the seminars could bring together multiple departments within the university.
Professor Jimmy Mays has been selected as one of the three 2011 recipients of the Herman F. Mark Scholar Awards of the Polymer Chemistry Division of ACS. The Awards will be given during 2011 ACS Annual Meeting in Denver, CO this August.

The Awards were established in 2006 and are sponsored by Elsevier, the publishers of the journal Polymer. It is founded to recognize excellence in basic or applied research and leadership in polymer science by scientists of all ages. The awards are usually presented biennially at the Fall meeting of the Polymer Chemistry Division.

Professor Mays is internationally recognized as a leader in synthesis of polymers and copolymers having tailored architectures. He is presently involved in synthesis of tailored polymers for such diverse applications as new and improved rubbers, low cost fuel cell membranes, and improved polymer-based batteries.

Professor Mays received his B.S. degree in polymer science from the University of Southern Mississippi and his Ph.D. degree in polymer science at the University of Akron. He then worked in industry for five years with Hercules, Inc., prior to joining the chemistry faculty at the University of Alabama at Birmingham. Dr. Mays moved to Tennessee in 2002 to accept a joint appointment at the University and Oak Ridge National Laboratory.

“Professor Mays is internationally recognized as a leader in synthesis of polymers and copolymers having tailored architectures. He is presently involved in synthesis of tailored polymers for such diverse applications as new and improved rubbers, low cost fuel cell membranes, and improved polymer-based batteries. Professor Mays received his B.S. degree in polymer science from the University of Southern Mississippi and his Ph.D. degree in polymer science at the University of Akron. He then worked in industry for five years with Hercules, Inc., prior to joining the chemistry faculty at the University of Alabama at Birmingham. Dr. Mays moved to Tennessee in 2002 to accept a joint appointment at the University and Oak Ridge National Laboratory. The late Herman Mark was one of the pioneers of polymer science, and it is a great honor to receive this prestigious award that bears his name.” While feeling honored to be given this award, Professor Mays expressed his gratitude towards those whom he has collaborated and worked with. “In reality this award does not so much recognize my personal contributions to polymer science as it recognizes those of the numerous students, postdocs, and collaborators that I have had the pleasure of working with over the years. I also thank Professor Mark Dadmun for nominating me for this award”.

The award consists of a plaque and an endowment of $1000, which may be used to support travel expenses to the ACS Meeting including the Herman F. Mark Symposium, where each Mark Scholar is expected to present a lecture.

The Department of Energy recently awarded more than $1 million to a research project, “Imaging Lignin Degradation,” for a three-year period to a research team including George Kabalka, PhD, Professor, Robert H. Cole Neuroscience Endowed Chair and Director of Research, Radiology at the University of Tennessee Graduate School of Medicine, and investigators at Pennsylvania State University and Wesleyan University. Their research aims to identify novel enzymes that can be used to convert lignocellulosic material, found in wood, into bioethanol as an energy resource. The project will involve radioligand development and PET imaging, Dr. Kabalka’s area of expertise. Lignocellulosic material is the most abundant renewable carbon source in the biosphere. However, it is encased in a lignin barrier and the barrier’s chemical recalcitrance is a major obstacle in the efficient utilization of lignocellulosic material. Lignin peroxidase, a lignin-degrading enzyme, was discovered 25 years ago but has proven to be one of the most expensive parts of converting lignocellulosic material to bioethanol. Since that time, the known list of enzymes capable of degrading lignin has not significantly increased, and this research team hopes to identify previously uncharacterized enzymes in the degradation and further utilization of lignin. The team has noted that lignin degradation occurs in complex environmental niches that are yet to be characterized, including within wood-feeding insects and in marine environments, and they hypothesize these niches contain microbial consortia that are distinct from the pure-culture systems where the peroxidases were discovered. The research team plans to use near infrared fluorescence imaging to detect the initial biological depolymerization reactions of lignin. They then will use positron emission tomography to detect the initial biological depolymerization reactions of lignin and the subsequent degradation of the aromatic monomeric units. Using these methods, the researchers can potentially establish the presence and location of lignin degradation in previously unexplored ecological niches, providing the foundation for discovery of uncharacterized enzymes involved in lignin degradation and ultimately leading to improvements in lignocellulosic biomass utilization.

The primary investigator in this project is Ming Tien, PhD, Department of Biochemistry and Molecular Biology, Pennsylvania State University, with Dr. Kabalka and Erika Taylor, PhD, Department of Chemistry, Wesleyan University, participating as co-investigators. (UT Grad School of Medicine http://gsm.utmck.edu/news/archive/2010/oct.cfm)
**Dr. Musfeldt Elected as NHMFL User Committee Chair**

Dr. Janice Musfeldt, Professor of Chemistry, was elected Chair of the Users Committee of the National High Magnetic Field Laboratory, effective January 2011.

Established by the National Science Foundation Cooperative Agreement, the NHMFL’s Users Committee represents the laboratory’s broad multidisciplinary user community and advises the lab’s leadership on all issues affecting users of the facilities.

Musfeldt joined the faculty in 2001. Since then, she has made many contributions to the field of spectroscopy of materials under extreme conditions. She is particularly well known for forwarding high magnetic field spectrophotometric studies of complex solids, although she is also interested in low temperature, high pressure, small size, and frustration effects in functional materials. Her scientific work is extensively cited, and she is in great demand as an invited speaker. Musfeldt serves the materials community via extensive conference, school, and workshop organization.

**Dr. Schweitzer Recognized for 60 Years of Service**

George Schweitzer, Alumni Distinguished Service Professor in Chemistry, has been an active member of the faculty in chemistry for over 60 years. He was the first Macebearer for the University in 1966.

Schweitzer has an active, funded research group in the area of lanthanide research, and most recently he has collaborated with researchers in the Department of Nuclear Engineering to develop new neutron detectors. He and a former student of his, Dr. Lester Pesterfield, published a book entitled The Aqueous Chemistry of the Elements with Oxford University Press in 2010. The first printing of this book has already sold out.

**Dr. Dai Named ORNL’s Top Scientist by UT-Battelle**

OAK RIDGE, Tenn., Nov. 15, 2010 -- Sheng Dai, a researcher in the Chemical Sciences Division of the Department of Energy’s Oak Ridge National Laboratory, has earned the UT-Battelle Director’s Award for Outstanding Individual Accomplishment in Science and Technology.

He was honored by ORNL Director Thom Mason for “world-class leadership in the synthesis and application of novel functional porous materials, nanomaterials and ionic liquids to energy-relevant problems.”

Dai, who was also named this year’s distinguished scientist at UT-Battelle’s annual Awards Night, is an internationally recognized leader in the design, synthesis and application of mesoporous materials and ionic liquids to problems related to the nation’s energy challenges.

Dai was cited for his innovative breakthroughs in advanced materials that can be applied toward technologies ranging from improved batteries for electric vehicles to catalytic systems for water purification. He leads his division’s nanomaterials chemistry group and is also a task co-leader for the catalysis research effort in the multiscale functionality group at the Center for Nanophase Materials Sciences.

(http://www.ornl.gov/news)

**Dr. Hazari Helps Arabic Translation of ACS Publication Safety in Academic Chemistry Laboratories**

About a year ago, a partnership between Professors Al Hazari, former chair of the ACS Committee on Chemical Safety (CCS), and Akram Amir El-Ali was formed to translate the popular publication, Safety in the Academic Chemistry Laboratories, into Arabic. The publication, Safety in Academic Chemistry Laboratories, aids in educating chemistry students about their responsibility to conduct themselves in a safe manner. This Arabic version expands that reach. As a post script to this work, the Board on Chemical Sciences and Technology of the National Academy of Sciences has recently developed educational materials on chemical laboratory safety and security for developing countries based on the NRC reference book Prudent Practices in the Laboratory and the recent report Promoting Chemical Safety and Security in Developing Countries. The work is funded by the U.S. State Department. Professor Hazari was recently tapped to help in the translation of these materials. (American Chemical Society Councilor Bulletin)

**Dr. Xue Named AAAS Fellow**

Ziling Xue, professor of chemistry, has been named a fellow of the American Association for the Advancement of Science for distinguished contributions to the field of inorganic-organometallic chemistry, particularly for synthesis of metal complexes and mechanistic studies of the formation of metal carbenes.
Peng Chen’s Paper Accepted in Nano Letters

Peng (Jacky) Chen, a graduate student in Dr. Janice Musfeldt’s research group has one paper accepted in Nano Letters, an ACS publication reporting on fundamental research in all branches of the theory and practice of nanoscience and nanotechnology.

Chen, cooperating with Xiaoshan Xu and Dr. Musfeldt from the University of Tennessee and Christopher Koenigsmann, Alexander Santulli and Stanislaus Wong from the State University of New York, in their paper “combined infrared spectroscopy with group theory and lattice dynamics calculations to reveal the displacive nature of the ferroelectric transition in BiFeO3, a room temperature multiferroic” (abstract from the authors).

The findings, in Chen’s words, could demonstrate “the foundational importance of size effects to elucidate ferroelectric transition mechanisms”, and also illustrate “the far-reaching potential of finite size effects for band gap modification of functional oxides that may have applications in flexible ferroelectric photovoltaic devices and oxide-based electronics”.

Out of 59 journals in Nanoscience and Nanotechnology, Nano Letters is No. 3 in ISI Impact Factor: 9.991, based on the 2009 Journal Citation Reports” by Thomson Reuters; and No. 2 in citations, with 46,238 total cites.

Chen is very excited about publishing in Nano Letters as a second year graduate student. He also thanked his advisor Dr. Musfeldt for this achievement. "I cannot achieve it without the guidance of my advisor Dr. Janice Musfeldt and cooperating with the collaborators. But I know there is a long way to go in the scientific career and I am ready for the challenges.” Chen said.

Chen was born in Hubei, China. He received his B.S. in Chemistry in 2002 and M.S. in Software Engineering in 2005 from University of Science & Technology of China (USTC). After four years of working in the Keenmicro Financial System Inc., Chen joined the research group of Dr. Janice L. Musfeldt in the spring 2009 pursuing his Ph.D. degree in the University of Tennessee. His current research focuses on the study of optical properties of novel transition metal oxides.

Horton and Njiojob won 2010 BoV Graduate Student Poster Competition

Chemistry Graduate Students Rebecca Horton from Dr. Frank Vogt’s group and Costyl Njiojob from Dr. David Baker’s group won 2010 Board of Visitors Graduate Students Poster Competition.

2010 Department of Chemistry Board of Visitors Annual Meeting was held on Nov. 12 and 13 in Buehler Hall 511. Followed by a report and discussion of the news, changes and development inside the department, the Board of Visitors members served as judges for this year’s Graduate Student Poster Competition.

Eleven groups participated in the competition. The winners Horton and Njiojob were invited to give presentations during the Department’s annual student presentation on April 14, 2011.

“I feel honored to have the opportunity to give a seminar to my peers. The poster session and seminar are great ways to practice good communication skills and what better way to do so than in front of the faculty and fellow students.” Horton said.

Horton came to UT from Carson-Newman College in Jefferson City, TN. Her recent achievements in research involve growing microalgae under different environmental conditions along with sample preparation methods of species for spectroscopic analyses.

“I am planning for a December 2011 graduation.” Horton mentioned her plan after graduation. “Upon graduating, I would like to work in an industrial setting and later transition into academia at a small college. By having the perspective of both my graduate career and also the industrial experience, I feel I would be better prepared to mentor students on their chosen career paths.”

The other poster winner, Costyl Njiojob, a native Cameroonian, was born in Nigeria (Plateau State) where he received elementary education. Njiojob then moved back to Cameroon with his family and completed high school there.

In 1999, Njiojob entered the University of Buea to pursue a Bachelor’s Degree in Chemistry. After graduation, he remained in the university and conducted a year of graduate research in Natural product chemistry. Njiojob joined Dr. Baker’s group at UT Chemistry Department with a concentration in organic synthesis in 2006.

Njiojob expressed his gratitude toward people inside the Department, “...it feels like a recognition to all the efforts being put in everyday to do research and all what I can say is thanks to everyone in the department who has been of great help to me since I started graduate studies”.

Njiojob is expected to graduate in August 2011 and would like to continue with his research in the scientific community.

Besides Horton and Njiojob, the Board also suggested that honorable mention should be made of Michael Peretich from Dr. Barnes group and Belinda Lady from Dr. Foister’s group.
Camden group attends International Conference on Raman Spectroscopy

The Camden group attended the International Conference on Raman Spectroscopy held at Boston, MA from August 8 to 13. During the conference, Dr. Camden presented a talk on Wavelength Scanned Surface Enhanced Hyper Raman Spectroscopy. Chris Bennett and Vighter Iberi both presented posters at the student poster session.

Bennett collaborated with Camden and discussed recent advances in Hyper Raman spectroscopy in his project. Topics include a discussion of wavelength-scanned surface enhanced hyper Raman spectroscopy of various active molecules. Unusually high Hyper Raman signal has been produced on silver colloids from incident laser power as low as 106 W/cm2 average power. This has enabled the discovery of a new two-photon accessible resonant mode in Rhodamine 6G (abstract provided by Chris Bennett).

The goal of Vighter, Camden and Guiton’s project is to correlate the optical measurements of nanostructures generated by the surface plasmons using Resonant Rayleigh Scattering, with high resolution structural information obtained by using Scanning Transmission Electron Microscopy (STEM). This technique will also reveal the different localized surface plasmon modes in the nanostructure as well as the relationship between the optical surface plasmons and the plasmons generated from the inelastic scattering of the electron beam. The measurement of the surface plasmon excitations in a STEM is called Electron Energy Loss Spectroscopy (EELS)(abstract provided by Vighter Iberi).

Jenkins group publishes paper in ACS publication Organometallics

Chemistry graduate student Irene Abia from Dr. Baker’s group received a Leadership Development Award from Younger Chemists Committee (YCC) of the American Chemical Society (ACS).

The award will support Abia to attend the YCC Leadership Development Workshop. This YCC program recognizes emerging leaders in the profession and helps them prepare for the leadership opportunities at volunteer organizations, such as ACS, and in their professional careers.

Abia will attend the workshop from Friday, January 21, 2011, to Sunday, January 23, 2011. The workshop is held in conjunction with the ACS Leadership Institute, in Fort Worth, Texas. During the workshop, participants will engage in discussions about the characteristics and behaviors of effective leaders, identify leadership skills, develop a personal leadership development plan, and learn about leadership opportunities in the American Chemical Society.

Paper abstract:

18-Atom-ringed macrocyclic tetra-imidazolium ligands have been synthesized by a two-step procedure and are the smallest free tetra-imidazoliums to date. The structures of the tetra-imidazoliums were characterized by multinuclear NMR and high-resolution ESI/MS to distinguish them from the potential di-imidazolium species. These tetra-imidazolium ligands form monomeric tetra-carbene complexes of platinum through in situ deprotonation.

SAACS Hosts 2011 Mentoring Day

The Student Affiliates of the American Chemical Society (SAACS) group hosted 2011 “Chemistry Mentoring Day” on Wednesday, April 27v, 2011 in Buehler Hall.

This year, 28 students from 7 local high schools and their teachers participated. Students had the opportunity to take tours of research laboratories, enjoy talks with chemistry faculty, facilities demonstrations, a one-on-one question and answer session with current students during lunch, and a visit to an actual introductory chemistry lecture.

“On Mentoring Day, we invite high school students who are interested in chemistry at the post-secondary level to visit our department and get a feel for what “college chemistry” is really like.” Professor Michael Best, faculty advisor of SAACS said.

James Humble, SAACS event coordinator, has been part of Mentoring Day for four years. “It is always interesting to see the look of awe that these students usually have upon entering a real research lab for the first time. It always makes me smile.” Humble said.
The year 2011 marks the 10th anniversary of the retirement of Professor Wunderlich from the Chemistry Department of UT and the Chemistry Division of ORNL. He was born 1931 in Germany, emigrated 1954 to the US, and 1960 became a citizen. Wunderlich’s professional career began in 1957 with a Ph.D. in Physical Chemistry from Northwestern University. His first teaching positions were at Northwestern University (Instructor, 1 year), then at Cornell (Instructor, 2 years, Asst. Prof., 3 Years) and Rensselaer Polytechnic Institute (Assoc. Prof., 2 years, Professor since 1965). From RPI he retired after 25 years of service, to take his last position as Professor and Distinguished Scientist at the University of Tennessee and Oak Ridge National Laboratory. There, after 14 years, he retired in 2001, but kept active in teaching and research until 2007. During his career, he published more than 600 technical papers and books, including a three-volume treatise on “Macromolecular Physics” (1973–80) and a 1,000 page text on “Thermal Analysis of Polymeric Materials” (2005) with a parallel computer course on the same topic. Since retirement in 2001, he has completed more than 100 publications.

Throughout his career, his research interest has been the solid state of linear macromolecules, studied by various forms of adiabatic, scanning, and temperature-modulated calorimetry and other thermal analysis techniques. On a molecular and structural level, his work made use of microscopy (optical, electron, X-ray) and AFM, and included X-ray diffraction, light scattering, IR analysis, and the testing of molecular motion with solid state NMR and neutron diffraction. In 1971 Professor Wunderlich was named one of the Outstanding Educators of the United States, and in the same year he received the Mettler Award in Thermal Analysis of the North American Thermal Analysis Society (NATAS) in recognition of his research. Other honors included the Doolittle Award of the ACS (1975), a Fellowship for the Promotion of Science in Japan (1983), the German Humboldt Award (1986), the Swiss Prize for Thermoanalytic and Calorimetry (1993). In 1996, he was given the TA-Instruments Award of the International Confederation of Thermal Analysis and Calorimetry (ICTAC), and in 2002 the Distinguished Service Award of NATAS. His lifetime achievements were honored at the 2006 NATAS Meeting.

In 2010 his autobiography was published by Springer as a book and e-book (ISBN 978-3-642-11195-2) with the title “A Science Career Against All Odds—A Life of Survival, Study, Teaching and Travel in the 20th Century.” This book was an attempt to describe the interactions between personal life, the political upheaval of the times, the development of the teaching of science, the progress of research, and the extensive travel which became part of his international recognition and his ‘need to know.’ The initial years of his life were characterized by a turbulent and seemingly random path of education and life experiences in the 1930s and 40s during the oppressive 3rd German Reich. These early childhood insights made him an undesirable student in the 1950s in the totalitarian German Democratic Republic, and ultimately led to emigration to the USA. The unforeseeable results of writing this book were many links between Professor Wunderlich’s love of teaching and research to these earliest experiences in his life. He would not want to miss or change anything. This includes the times spent under two harsh dictatorships, life during WW II, which included 400 bomb-shelter visits, two periods as a refugee, and the first experience of normalcy as an immigrant. The lists of coworkers, publications, lectures and a summary of the 50 years of research are available at: http://extras.springer.com as a free download of the three Appendices to the book.
The Development Office of the College of Arts and Sciences would like to thank all alumni, donors, and friends of the Chemistry Department for their generous financial support. Gifts to the department are designated to support a variety of different funds which all have a tremendous impact on staff, faculty, and students. There are currently eight funds for academic support and seventeen for scholarship/fellowship awards. In future newsletters, we will attempt to include personal stories from individuals who have benefited from these funds as an example of how life-changing philanthropy can be. You will no doubt recognize some of these named funds; Buehler, Mamantov, Smith, and Eastham. If you or someone you know is interested in establishing a fund in honor or memory of someone, please contact Randy Atkins, Associate Development Director for the College of Arts and Sciences, UTK. He can be reached at matkin11@utk.edu or 865-974-2131.

M. Randy Atkins
Associate Director of Development
Office of Development
College of Arts & Sciences
2524 Dunford Hall
University of Tennessee
Knoxville, 37996-4000
matkin11@UTK.edu
(865) 974-2365

Current Campaign: Hilton Smith Fund

Fellowship was founded in 1999 by Dr. Edgar L. McDaniel, Jr. (BS Chem 1953 UT, Ph. D Chemistry 1956 UT), and his wife Katherine Taylor (BA Business Admin 1950 UT, MS Business Adm 1953 UT).

This fund was named after Dr. Hilton Smith, Dr. McDaniel’s major advisor, mentor and trusted friend over the years. During his studies under Dr. Smith, McDaniel was awarded a National Science Foundation Predoctoral Fellowship. Dr. McDaniel retired in 1993 from Eastman Kodak at Kingsport, TN as Director of External Product development.

The Fellowship has as its objective providing a supplement to Ph. D. doctoral students to enhance the base stipend.

Call for donation
We are almost there!

We are only $5 away for Hilton Smith Fund reaching endowment level.

To donate, please contact
M. Randy Atkins, Assistant Director of Development
865-974-2365
matkin11@UTK.edu

Or send your check to
Dr. Craig Barnes
Department of Chemistry
552 Buehler Hall
University of Tennessee
Knoxville, TN 37996

Please make check payable to UT Chemistry Department and your contribution must include a personal letter notifying us it’s for the ‘Hilton Smith Endowment in Chemistry’.

Thank you for your support!
All websites listed are maintained by Recruiting, Publicity and Development Coordinator Rachel Rui. If you have any comments or suggestions, please feel free to contact her at jrui@ion.chem.utk.edu
How do I Make a Gift or Pledge?

Getting started is as simple as a click. You can go to the University Giving page (https://web.dii.utk.edu/Alumni/), choose Knoxville campus - Arts and Sciences College - Chemistry Gift Endowment as the fund of your choice and start the giving process online.

You can also contact the Arts and Sciences Development Office.
Office of Development
College of Arts & Sciences
2524 Dunford Hall
University of Tennessee
Knoxville, 37996-4000
(865) 974-2365

How do I Make a Gift or Pledge?

Where will the money go?

General gifts go into the Chemistry Gift Endowment. The department head can use this pool of funds to enhance programs at his discretion. However, if you prefer your gift to be used in one area, you may designate your entire gift to one specific endowment.

- A.D. Melvanan Rhenium Endowment
- Burchfield Burridge Warner Endowment
- Calvin Buehler Chemistry Endowment
- D.A. Shirley Endowment
- Eastham Endowment
- Gleb Mamantov Endowment
- Graduate Student Leadership Endowment Fund
- Judson Hall Robertson Endowment
- Paul & Wilma Zeigler Endowment
- UTK Chemistry Enrichment Endowment Fund
- UTK Chemistry Support Endowment

Where will the money go?

The minimum endowment level is $25,000, though people have built endowments of well over $1 million. Typical purposes of endowments include scholarships, graduate fellowships, student and faculty travel, program endowments (in general support of a particular program), professorships, and endowed chairs.

Go to the Office of Development website http://www.artsci.utk.edu/development/index.asp to view more frequently asked questions about giving, such as:

- What will you use the money for?
- Will giving money help me get football tickets? Good seats? How?
- When are gifts due? All at once? Payable over time?
- May I donate appreciated assets (real estate, securities, other assets)?
- What are the different gift club levels?
- What are the different endowment levels?
- Can I give a gift for buildings or spaces?
- How does estate giving work (charitable trusts, simple bequests)? Are there tax benefits? Can I get help setting this up?
- How do endowments work?

Can I form an Endowment? For What Purpose?

Yes. The minimum endowment level is $25,000, though people have built endowments of well over $1 million. Typical purposes of endowments include scholarships, graduate fellowships, student and faculty travel, program endowments (in general support of a particular program), professorships, and endowed chairs.

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- When are gifts due? All at once? Payable over time?
- May I donate appreciated assets (real estate, securities, other assets)?
- What are the different gift club levels?
- What are the different endowment levels?
- Can I give a gift for buildings or spaces?
- How does estate giving work (charitable trusts, simple bequests)? Are there tax benefits? Can I get help setting this up?
- How do endowments work?
# Calendar

**Fall 2011**
- Classes Begin: Aug 17
- Labor Day: Sept 5
- Fall Break: Sept 29-30
- Thanksgiving: Nov 24-25
- Classes End: Nov 29
- Exams: Dec 1-2, 5-8
- Graduate Hooding: Dec 8
- UT Commencement: Dec 9

**Spring 2012**
- Classes Begin: Jan 11
- MLK Holiday: Jan 16
- Spring Break: Mar 19-23
- Spring Recess: April 6
- Classes End: April 27
- Exams: May 1-4, 7-8
- Commencement: May 9-11

# Contact Information

**Senior Administration**
- Dr. Craig Barnes, Department Head
- Dr. Charles Feigerle, Associate Dept Head

**Program Divisions**
- Organic, Dr. David Baker: 974-1066
- Inorganic, Dr. Ziling (Ben) Xue: 974-3443
- Analytical, Dr. Michael Sepaniak: 974-8023
- Physical, Dr. T Francon Williams: 974-3468
- Polymer Dr. Jimmy Mays: 974-0747

**Administration**
- Main Office: 974-3141
- Business Office: 974-3393
- Electronic Shop: 974-3145
- Communications: 974-8019

**Research Centers**
- NMR Facilities: 974-3386
- PCL Lab: 974-2087
- Mass Spectrometry: 974-0763
- Raman Facilities: 974-3141
- X-ray Facilities: 974-3141

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