

ELEMENTS

The Alumni Magazine of the Department of Chemistry at Virginia Tech



From the Department Chair

I have never known a building to be completed ahead of schedule. I have never known organic labs in any building other than Davidson Hall. I have never known Virginia Tech in the Atlantic Coast Conference. After my 36 years in residence, things are indeed changing. Virginia Tech will join the ACC in all sports July 1, 2004.

The new Chemistry-Physics building will accept its initial students Spring, 2004. All instructional Chemistry laboratories will be housed in the same building for the first time in over 25 years. Chemistry will

occupy the top three floors, approximately 40,000 assignable square feet. All student organic syntheses will be conducted for the first time in many of the 92 hoods in the building. Three spacious rooms for the Chemistry Learning Center, one computer classroom, and a large distance learning facility supplement the laboratory space. State funds totaling approximately \$1.6M are available for furniture and laboratory equipment. Professor Gary Long has won a NSF grant to assist in outfitting the analytical chemistry labs. Numerous faculty have helped in planning the building. New

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Commentary from the Advisory Council

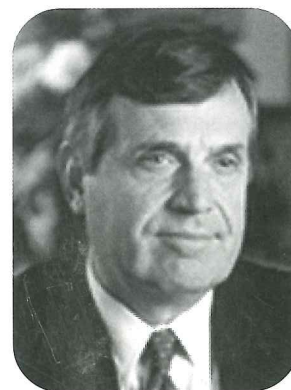
The Department of Chemistry is now part of the new College of Science. Chemistry was critical to the mission of the old College of Arts and Sciences and in the smaller, more focused College of Science, Chemistry will play an even more vital role. Chemistry has consistently brought in more research dollars to the University per faculty than all but one Department. In addition to its leadership role in research, Chemistry must provide basic chemistry instruction to hundreds of science and engineering majors every year.

Some of you might recall that Davidson Hall does not offer the most modern, well-equipped, state-of-the-art, garden spot teaching laboratories that you might expect from a Research I University. Fortunately, this is about to change. Construction is almost complete on the new Chemistry/Physics Building. This building is dedicated to instruction with numerous fully equipped and network ready classrooms and laboratories. We will now

have world-class teaching facilities that our world-class faculty and students deserve.

Moving into the new Chemistry/Physics building will also free up Davidson Hall for its long needed renovation. Renovation of Davidson Hall must remain the highest priority among capital projects for Virginia Tech. Our ability to recruit and sustain top rank faculty and graduate students is severely limited by our lack of research laboratory space. The Department of Chemistry Advisory Council* has been a vocal advocate of both the Chemistry/Physics building and the renovation of Davidson Hall. We have had numerous meetings with the administration and have made

(Continued on Page 2)



Comments from Department Chair - Continued

laboratory experiments are being written which utilized much of the new equipment. The Chemistry faculty person most involved with the new building is Professor John Dillard. With the aid of Wanda Hensley, a longtime and loyal staff person, John has kept anyone who is interested up-to-date on the building construction. I refer you to the "Construction News" on the departmental website which documents "pouring the footers" to "putting on the roof". An excellent picture of the new Chemistry Complex from the air can be found with this article. John pilots the plane, while Wanda takes the pictures.

Without John's constant supervision, the building, I am sure, would suffer. John not only attended the biweekly meeting of the various contractors and subcontractors, but he got to know many of the workers on a first-name basis. He personally has placed the orders for equipping the new building. He also has his own 'hard hat'! Words cannot express the great appreciation for the services of Professor John Dillard in overseeing the building construction. With no release time from teaching or research, John's efforts over a 24-month period were truly "herculean".

The rainbow of opportunities created by this new massive structure will help move Virginia Tech Chemistry further into the top tier of departments that are committed to quality teaching, strong in research, deep in scholarship, and consistent in outreach across the globe.

Comments from Advisory Council - Continued

sure that the appropriate state officials, including the Governor, have been kept fully aware of the accomplishments and needs of the Department of Chemistry. One of our communication tools is an Annual Review of the Department of Chemistry prepared by the Advisory Council. This Annual Review is too long to be included in the Department's newsletter, but you may request a copy by writing to the newsletter address.

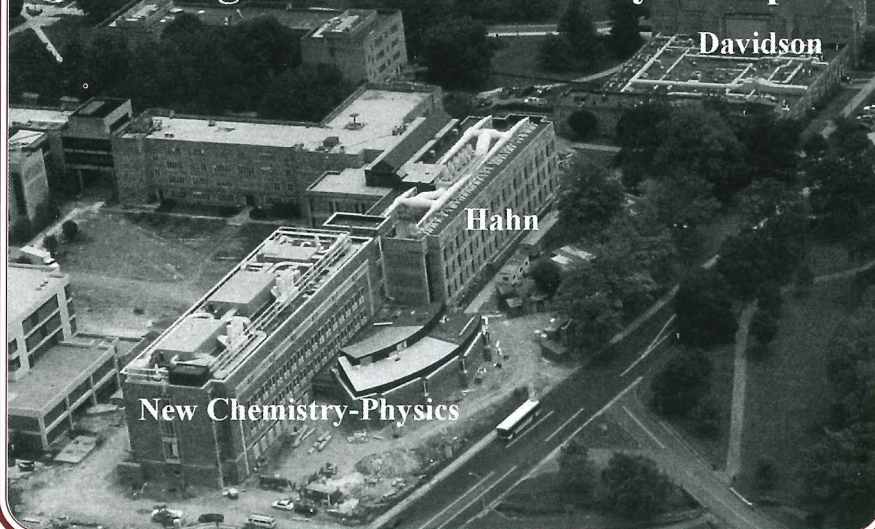
We encourage you to join the Advisory Council in its advocacy of the Department of Chemistry. We ask that Virginia residents write or call your representatives. Those of you who can, please contribute to the Friends of Chemistry scholarship endowment fund which will help to ensure excellence in our Department into the future.

E. Gary Cook
Chair, Advisory Council

*The Department of Chemistry Advisory Council is composed of VA Tech alumni from the business, academic and government communities. The Council provides advice, advocacy and assistance to the Department, its Faculty and its students.

Dr. Cook, (Ph.D., 1970) is the retired Chairman, President and Chief Executive Officer of Witco Corporation and has been Chair of the Advisory Council for two years.

The Virginia Tech Chemistry Complex



What's New In Chemistry

Chemistry Selected as Partner in Carnegie Initiative

The University's Chemistry Department has been chosen to participate in a multi-year research-and-action project aimed at improving doctoral education at American universities. The Carnegie Initiative on the Doctorate (CID) has selected 33 partner departments in chemistry, education, English, and mathematics to analyze aspects of their doctoral programs and link specific activities to desired outcomes.

Tech Chemistry Professor, Jim Tanko, described the CID as an opportunity for universities to participate in a discussion evaluating their goals for graduate education. Tech's Chemistry Department will have a seat at the table to participate in the group dialogue examining and assessing ideas pertaining to graduate education in chemistry.

Our chapter of Alpha Chi Sigma has (unanimously) won the bid to host the 2004 National Conclave (aka 47th Biennial Conclave)! This is a tremendous honor for both our chapter and also the university! It will take place between July 27-31, 2004.

William Ducker and Tim Long have been promoted to Full Professor and Paul Carlier has been awarded tenure. We are indeed fortunate to have these three very fine faculty colleagues.

The Mobile Chemistry Laboratory (MCL) was featured at the 17th Biennial ChemEd Conference the week of July 27 at Auburn University. A symposium that Sunday (Chemistry Outreach through Traveling Van Programs) was arranged to showcase the MCL and several other outreach programs.

Graduate Teaching Assistant Awards (2002-03 Academic Year)

Ella Chow – Nominated by Kaye Castagnoli and Dr. Paul Carlier for teaching in the Organic Chemistry Laboratory

Huimin Li – Nominated by Dr. Patricia Amateis and Jeanine Eddleton for teaching in the General Chemistry Laboratory

Steffanie Liskey – Nominated by Dr. Jim Tanko for teaching in the Physical Chemistry Laboratory

Laura Nakovich – Nominated by Dr. Gary Long for teaching in the Analytical Chemistry Laboratory

Graduate Research Awards (2002-03 Academic Year)

Feihe Huang – Nominated by Dr. Gibson

Changhui Liu – Nominated by Dr. Kingston

Jeremy Lizotte – Nominated by Dr. Tim Long

William Lokar – Nominated by Dr. Ducker



Summer Undergraduate Research Programs Abound

1. NSF REU grant to Tom Ward/Tim Long through the Center for Adhesive and Sealant Science. Twelve students
2. Judy Riffle's IGERT REU program. Seven students
3. Jim McGrath's PFI grant supplement. Seven students
4. Mark Anderson's new NSF-REU grant. Ten students

The Adhesion Science Award Committee met recently and informed the Chemistry Department that Christopher Palmer will receive the J.P. Wightman Scholarship this year. Chris is not a chemistry major, but is working with Tim Long. The title of his research in "Polymers as Gene Transfer Agents: Synthesis, Characterization, and Transfection."

In 6 semesters of operation, 27,500 experiments have been performed in the MCL by students in public high schools all over the Commonwealth according to Barbara Bunn, the traveling teacher. Many of these experiments are computer-driven, with several experiments using high tech instrumentation not normally available to freshman college students. This type of experiment not only motivates the students but gives them a head start for post secondary education. Over 500 letters of commendation from students, teachers, parents, principals, school superintendents, city and state officials and legislators have been received during the 3 years of operation.

DEPARTMENT HOSTS NORMAN HACKERMAN



On March 19, 2003 Professor Norman Hackerman returned to Virginia Tech campus after an absence of 62 years. Professor Hackerman presented a seminar and attended a special dinner hosted by University President Steger. Emeritus Professor Wightman invited Hackerman to campus and served as his personal host. Professor Hackerman, who turned 91 this year, taught at VPI in the early 1940's as an Assistant Professor in the Chemistry Department. Instead of teaching regular students at VPI, he taught soldiers under the Army Specialized Training Program. He had seven sections of two classes per week, teaching chemistry to guys who couldn't care less. When Norman asked the Head of the department about where he could do his research, he told him, "In Virginia, research is done at Charlottesville." Professor Hackerman is an emeritus chemistry professor and former president of both the University of Texas, Austin and Rice University in Houston. He headed both institutions, successively, during the turbulent 1960s and '70s and into the '80s.

INTERACTIVE DVD TEXTBOOK

Chemistry Instructor Ketan Trivedi has put a semester's worth of freshman chemistry onto an interactive DVD, first used this summer in distance learning courses in several places including Abingdon and Roanoke. The DVD has 10 chapters and several sections under each chapter, just as a traditional textbook would. The DVD contains 88 different voices as well as videos, animations, practice problems and timed multiple choice questions. It also includes an interactive periodic table, which speaks the names of the elements in a male voice for metals, a female voice for non-metals, and yet another female voice for metalloids. Trivedi and his company, Trivedi Technology Innovations International (T²I²), developed the DVD over the course of three years, looking at over 27 chemistry textbooks for guidance. It took Trivedi three-and-a-half months to develop the first periodic table for the project. Even then, he wasn't sure if he wanted to continue with the project given the amount of time it required. Within a year, Trivedi and his company hope to have a whole year's worth of chemistry on the DVD. Students can interactively learn about elements, formulas, and compounds through trial and error. Trivedi said using the DVD has made his lectures fresher and allowed the students to be more involved. Ten students have been very involved with Trivedi and the Project, and the students' input has made the project what it is, he said.

Student News



Jason Jones was selected to attend the 53rd Meeting of Nobel Laureates in Lindau, Germany, from June 30-July 4 this summer. This meeting was sponsored by the DOE Office of Science. Jason holds an ORISE (Oak Ridge Institute for Science & Education) fellowship for his graduate studies.

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Benjamin Courmier was funded \$600 for a travel grant to attend the New Orleans ACS meeting. The recognition is from the Division of Organic Chemistry of the ACS Undergraduate Travel Award program, sponsored by J&J Pharmaceutical Research and Development, L.L.C.

Matthew Shoulders was awarded a Department of Homeland Security undergraduate scholarship for the upcoming academic year. This was the first year the scholarship has been offered. The scholarship provides for tuition and fees and a monthly stipend until he graduates next spring and also entails an eight to ten week internship in the summer of 2004 at a site selected by the Department of Homeland Security.

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Brian Hoffman in the Taylor Research Group was awarded a \$300 travel grant to attend the 2003 Pittsburg Conference in Orlando, FL and give an oral presentation.

Mike Zalich was awarded a Fulbright Scholarship! Mike who currently works in the Riffle Research Group will be using the scholarship to work with Dr. Tim St. Pierre at the University of Western Australia in Perth.

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Ashley Milligan, a junior chemistry major, received the Glenn T. Seaborg Research Fellowship, which enabled her to spend the summer at Los Alamos National Laboratory.

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Courtney M. Eison, a BS chemistry major, received a \$5000 scholarship from 3M for the 02-03 academic year.

Faculty In The News



Karen Brewer and Paul Deck were granted Research Assignment Leave as recommended by Dean Chang and Larry Taylor. Karen's assignment is for the period August

10, 2003 – December 24, 2003. Paul's assignment is for the period December 25, 2003 – May 9, 2004.



Harry W. Gibson of the Chemistry Department presented an invited lecture entitled "Self-Assembly Using Macromolecular Building Blocks" at the Seventh International Conference on Frontiers of Polymers and Advanced Materials in Bucharest, Romania on June 11, 2003. The presentation featured the research of students Jason W. Jones and Feihe Huang and postdoctoral associates Zhongxin Ge and Auric Farcas, a Romanian, on complexation of functionalized polymers with each other, with multifunctional small molecules and with fullerenes.



Daniel Crawford was selected to receive a Cottrell Scholar Award from Research Corporation for his proposal "Quantum Mechanical Studies of Chirality: Local Correlation Methods for Optical Rotation in Large Molecules." The Award was for \$75,000 to be used at Daniel's discretion. The Research Corporation is funding 12 of the 122 proposals submitted this year in the areas of chemistry, physics, and astronomy. Other winners are from Cal. Tech, Washington, Notre Dame, Syracuse, Illinois, Georgetown, Iowa State, Arizona, and Oregon.

Harry Gibson's paper entitled "First supramolecular poly (taco complex)" was among the top ten accessed on the web from the online version of Chemical Communications. In June, the article received 680 accesses, placing it within the top ten.



Brian M. Tissue attended The 14th International Conference on Dynamical Processes in Excited States of Solids during August 3-8, 2003 in Christchurch, New Zealand. There were 46 oral and approximately 70 poster presentations at this conference from researchers throughout the world. Brian presented a 20-minute invited talk on Aug. 4 entitled: "Luminescence Dynamics in Rare Earth-Doped Gd₂O₃ Nanoparticles."



The Hayden McNeil Publishing Company featured the Analytical Chemistry 3124 lab book and **Gary Long** as their author for the month of August, 2003.

John Morris is the sole awardee of a DURIP grant from Virginia Tech. DURIP supports the purchase of state-of-the-art equipment that augments current university capabilities to perform cutting-edge defense research.

Geno Iannaccone was honored as a nominee for the President's Award for Excellence in 2002-2003.

Faculty In The News continued



Brian Hanson was the recipient of the Clifford Service Award this year. Agness Chandler was the recipient of the McNair Staff Award.



John Morris was invited to participate in Grambling State University's Second Annual Biomedical Research Symposium. John presented a seminar on both his research and opportunities for graduate study at Virginia Tech. The Symposium is designed to provide role models to Grambling State students and to provide encouragement to minority students to pursue graduate education toward Ph.D. or Ph.D/MD programs.



Tim Long was selected as one of the VT Panhellenic Teachers of Excellence for 2003! As part of the Greek Week Festivities each of the sororities chose three teachers they viewed as outstanding.



Jim McGrath was presented with the Polymer Chemistry Division Special Service Award. This award recognizes continued dedication service to the Division of Polymer Chemistry, Inc. Jim's tremendous continued service with organization of POLY workshops saw its culmination with a record breaking attendance at the Fuel Cells Membranes workshop earlier this year. In addition, Jim's organization of Polyolefins, Polyurethane, and Condensation Polymer workshops and others has greatly benefited POLY and has attracted polymer scientists and managers into participating in POLY activities.



David Kingston traveled to Suriname May 12-16 as part of his International Cooperative Biodiversity Grant. He met government leaders to discuss the continuation of the work and made a trip to a collection site in the rain forest.



Patricia Amateis and Gordon Yee were awarded \$4000 by CEUT to provide at no cost an interactive CD to incoming freshman students who will take chemistry fall, 2003. The



CD must be requested by the student and it concerns mainly quantitative preparation for the course.

The 2004 winners of the Flory Education Award presented by the Division of Polymer Chemistry of the ACS is the team of **Jim McGrath, Garth Wilkes and Tom Ward.**

Spotlight on Research Faculty

Kay Castagnoli

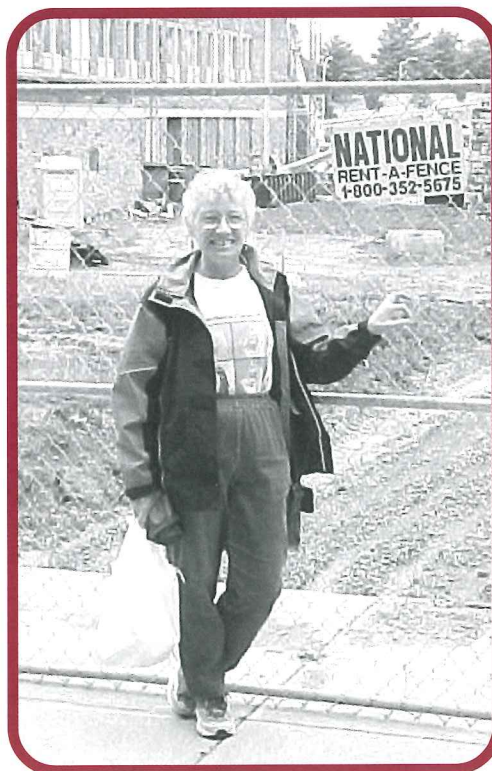
Kay Castagnoli, a senior research scientist in the Harvey W. Peters Center and instructor of the Organic Labs, initially became excited about chemistry in a high school class when she learned about electrons moving in orbitals around a nucleus. Following high school, she attended the University of California at Berkeley, where she was one of only three women in the Chemistry class (times change). Her initial professional position was in the research group of Dr. Ronald Miller, Chair of the Anesthesia Department, at the University of California, San Francisco where she worked on neuromuscular blocking drugs. In 1988, she and her husband Neal Castagnoli, the Peters Professor of Chemistry, relocated to the Chemistry Department at Virginia Tech. Her current research interests focus on neurotoxicity and neuroprotection in a brain area affected by Parkinson's Disease. A major focal area involves examining the role of monoamine oxidase (a brain enzyme which regulates neurotransmitters) inhibitors which are present in tobacco smoke. There are suggestions that they may be related to the lowered incidence (~40%) of Parkinson's Disease seen in smokers and that they might be involved in the addiction process. Current collaborative projects include a smoking cessation program at Duke University (Dr. Jed Rose) and a study on young female smokers with Dr. Helen Crawford (Psychology) and Dr. Peggy Meszaros (Center for Technology Impact on Families) at Virginia Tech.

In the fall of 2002, she, with great enthusiasm, became the instructor for the Organic Laboratories. In her own

words, "I owe much of my exciting and successful career to the outstanding education I received at UC Berkeley. It is my commitment to provide an equally outstanding education to our students. It requires a team effort to provide this education to our undergraduates. We have made changes that demand much more effort from everyone involved, but I have found that overwhelmingly the teaching assistants and the laboratory coordinator support and encourage these changes. For example, we believe in the students working individually (I tell them one doesn't learn to run a mile by watching somebody else run half of it), taking written exams which test them on the fundamental concepts, being

responsible at all times and learning to think critically and independently. We have made organizational changes and changes in the laboratory experiments. We work closely with the Organic Division faculty in order to incorporate whenever possible those areas that they think are of greatest importance. It is a challenge and a joy and I am delighted to have the opportunity to work with all 630 students."

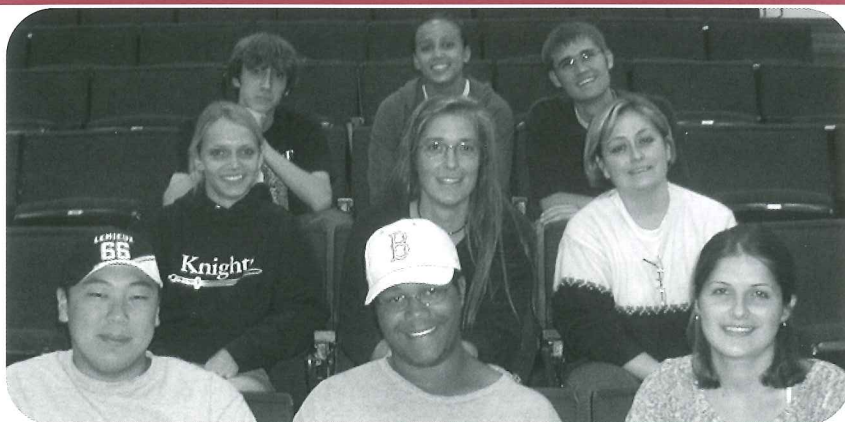
Kay is also an amateur classical pianist who, by invitation participated in the prestigious First International Van Cliburn competition for Outstanding Amateurs and she holds the women's record for ages 50 -54 for the annual Blacksburg Draper Mile foot race.



Alumni Spotlight

Jeannine Eddleton

At 17, and having no clue, I surveyed my General Chemistry classmates in McBryde 100. There were over 5 times more of them than there were kids in my high school graduating class. And then, on stage, Larry Taylor exploded a hydrogen balloon. I didn't see it; I wasn't paying attention. That was September 23, 1982. I've since learned to pay attention. At 18, John Madis hired me to work in the chemistry stockroom. I filled liquid nitrogen tanks, hauling them between Davidson and Robeson, sold glassware, pumped solvents, ground dry ice, rearranged gas cylinders as they were delivered and purchased, and distributed packages to the entire department. The department covered many fewer square feet than it does now, nevertheless, today I have to visit the gym to get the same workout. That year too, a fellow classmate, a cute Marching Virginian that I'd met in Brian Hanson's inorganic class, determined to quickly dismantle his glassware, started a fire in the sink in syn tech lab WHILE we all had our arms in there with OUR glassware. A rather large and scary fire as those things go. When I do the sodium metal in water demonstration these days, I make sure there is no hexane present. At 20, I asked a fellow chemistry major with a Virginia Tech-issue symphony band tuxedo to ring dance. Yeah, it was the firestarter from syn tech, but what the heck, he was tall (and I'd already bought the dress and the shoes.) That tux hangs in his closet today and we'll be married 16 years this November. At 21, in my exit interview with Jim Wolfe, he asked me what I wanted to do with my life. Again, no clue. Well Jeannine, he said, we've got this job. Lecture



demonstrator. And for the next 13 years, excepting a 2 year tenure teaching high school chemistry in Roanoke (which ended with a phone call from Jim Glanville for which I remain grateful), I worked in the little lab behind Davidson 3 (inflating several hundred hydrogen balloons in that time.) I set up and cleaned up (chemistry department professors are a real mess, some are worse than others!) demos all over campus, and took collections of my favorites regularly and often to area schools.

And I still have not stopped taking classes at Virginia Tech. I finished the coursework for a Ph.D. in chemistry and hated the research lab (and cumes) so much that I quit. In 1998 I started all over in the Department of Teaching and Learning Ph.D program. So 347 credit hours later I STILL don't have a Ph.D. I DO, however, have 4 children with the firestarter (who has made his career in sales and in industrial water treatment, thanks Harold Bell.) Many have tried to clue me in, "If you'd stop making babies, you'd have the degree by now." Yeah, yeah. But I do now have a projected date of graduation, December 2004. And I LOVED working with Jim Wightman as my next door office neighbor. I LOVED being recognized by little kids in Krogers as

that chemistry lady. I LOVE it when my business majors say that chemistry is their favorite class. I even LOVED cleaning up fire extinguisher residue in the deafening scream of the alarm after yet another of John Dillard's pyromanic episodes. True story. But then, I'm a chemistry nerd. What'd you expect? And I do have a clue. Not one moment has been wasted on stuff I didn't LOVE to do. (Well maybe I didn't LOVE pchem, sorry Paul Field...and Field again and Jack Graybeal and George Sanzone, whew.) And when the time comes that I no longer work in the basement of Davidson Hall, there's this book I need to write...



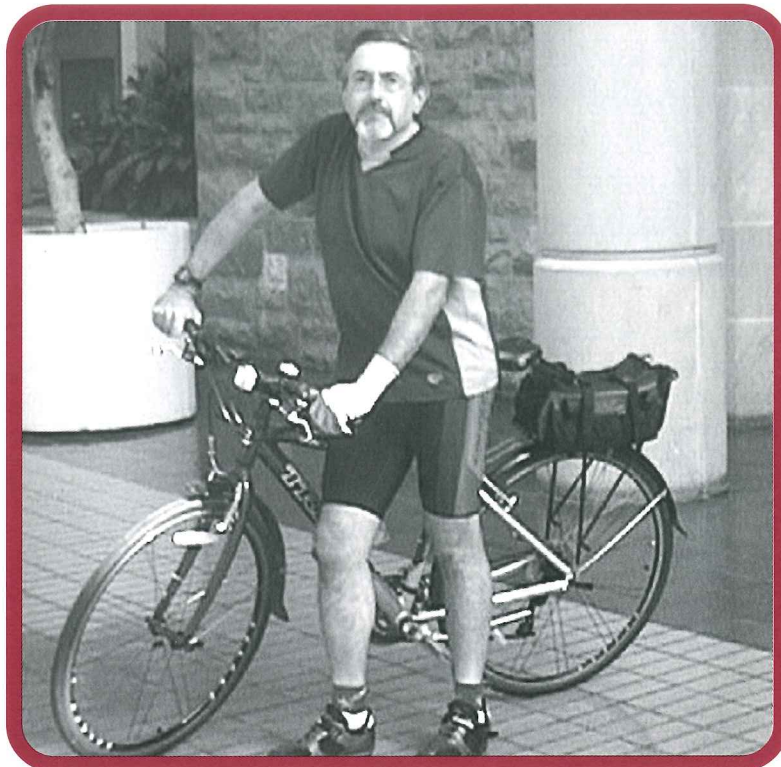
Editor's Note: Jeannine received a M.S. in Chemistry in 1996 with Gary Long and Larry Taylor.

Staff Spotlight

Geno Iannaccone

Geno Iannaccone, Manager of the Department of Chemistry Analytical Services, has consistently made extraordinary contributions by consistent excellence in the performance of his job. His attitude of team player and unparalleled loyalty have served as a model for other staff in the Department. He is considerate not only of the people around him, but he is a very responsible financial manager. He never exceeds his allocated budget, for example.

On a personal note, Geno is an avid bicyclist. He bikes 6 miles everyday to the bakery for lunch. For him, this accomplishes several things; it gives him some exercise, it reduces his stress, it helps the environment, and he doesn't lose his parking space! Geno is also a member of the NRVBA (New River Valley Bike Association). In addition to training with the club he rides the Wilderness Road Ride and the 100 mile Burkes's Garden Century each year.



Geno likes to canoe and kayak on a regular basis. He is a staff member of the Whitewater Adventure canoe camp program based in Callaway, VA. Seventh through twelfth graders participate in week long canoe camping trips on the New and James rivers. Geno also helps lead day trips for Blacksburg Parks and Recreation, and in the winter and spring helps teach kayak basics at the Blacksburg Aquatic Center.

In the winter months he enjoys skiing at the local West Virginia resorts with his daughter who is an avid skier. John Dillard introduced Geno to skiing as a first year graduate student on an outing he led many many years ago. Last year was their first trip out west to Park City, Utah. Geno remarks, "When I was on the slopes I was reminded of Alan Clifford who always loved to ski at the Snowbird resort just down the mountain from Park City."

Geno is an active participant in the polity of his church and has served as Senior Warden, taught Sunday School, been convocation president, and has served on a number of Diocesan committees and boards.

Students and faculty alike speak glowingly of Geno's value to the department. We are truly fortunate to have a person like Geno as manager of our Analytical Services.

Some of the Chemistry Faces

Linda Sheppard



Angie Miller



Agness Chandler



Wanda Hensley



Vicki Hutchison



Tom Bell

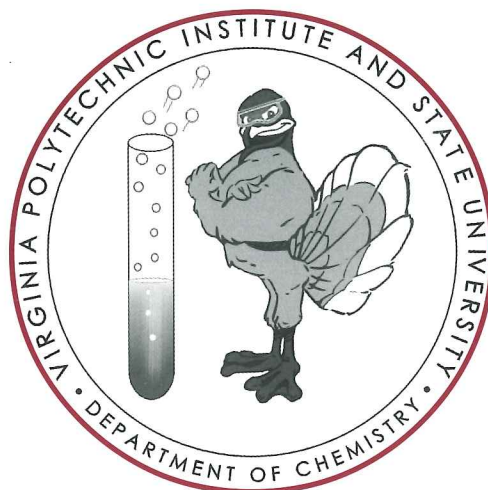


Roberta Gilbert

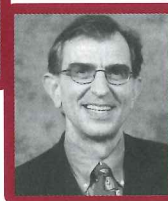
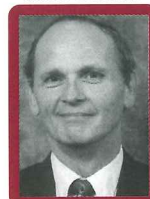
Judy Spicer



Brenda Mills

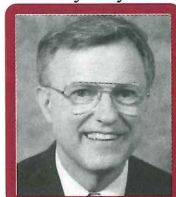


John Dillard



Rich Gandour

Larry Taylor

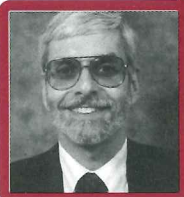
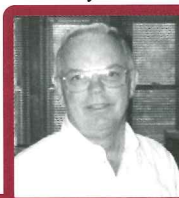


J.P. Wightman

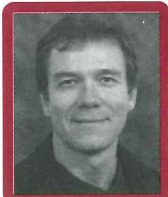
Gary Long



Jimmy Viers



Joe Merola



Jim Tanko



Felicia Etzkorn



Carla Slebodnick

Faculty Spotlight

Professor Harry W. Gibson

Harry was born in Syracuse, NY in 1941, but during the war lived with his mother, Jennie, and her parents on the Groves family farm in Lorraine, NY, a small town about 30 miles north. When his father, Harry T., alias 'Hoot', returned from his service in the Navy at the end of the war, Harry vividly remembers peering over the back of the sofa at the soundly sleeping man in the sailor suit and wondering who he was. When Harry was 5 the family moved further north to Pierrepont, NY to the Gibson family farm, which his father had inherited. This is where Harry grew up, in the foothills of the Adirondack Mountains, 60 miles south of Montreal. Although Harry T. worked as a welder, the farm supported cows, chickens and occasionally hogs to help stock the family larder. Harry W. (known to the family as Bill) had charge of the chickens and learned the value of hard work with other farm chores, such as milking, picking berries, haying, cutting and stacking wood, etc.

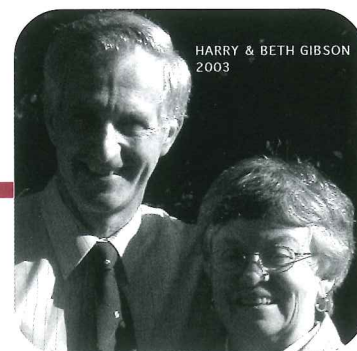
Harry walked a mile each way to attend a one-room school for the first year in Pierrepont, but early one cold (-20°F) winter day the school burned down, so all the children were sent to Colton to a multi-room school. Harry sat at a vacant desk for the first two days and then the absent occupant returned and demanded her desk back; the absentee (Beth Hurley) some 14 years later became his wife! Through school Harry was active in band, student government

and lettered in baseball, basketball and softball. He managed to finish a rather distant second academically to his future wife.

Harry earned a full scholarship from Jones and Laughlin, Harry T.'s employer, to attend college. He opted to attend Clarkson, which was only 10 miles from home, to save further expenses earmarked for his younger siblings. After graduation, Prof. Milton Kerker along with Prof. Egon Matejevic persuaded Harry to stay at Clarkson for his PhD instead of following his plan to attend Cornell or the U of Rochester. Harry, with an NDEA fellowship, worked with Prof. Frank Popp in the area of hereocyclic chemistry directed toward the synthesis of isoquinoline alkaloids. During the second year of graduate school, first daughter Kate was born (after a harrowing 30 mile drive over icy February roads to the hospital in Ogdensburg). Later that same year Harry bought his new first car, a 1964 Mustang for \$2,373.

Following his 3-year graduate school stint Harry spent a postdoctoral year at the University of Notre Dame working with famed stereochemist Prof. Ernest L. Eliel. He learned a lot in his time there and appreciated the keen intellect and lucid teaching manner of "Chief E". Just a week before departure appropriately enough, red-headed son Mark arrived!

In 1966 Harry embarked on his industrial career, starting with Union Carbide in Tarrytown, NY, just north of New York City. The chemistry and colleagues were wonderful, but it was expensive and urban (they usually go together), so in 1969 off to Xerox in a suburb of Rochester, NY. The older two children graduated from high school



HARRY & BETH GIBSON
2003

there. Second daughter Christie was born in Rochester. Much to Beth's chagrin Harry purchased his first four wheel drive vehicle, a 1963 Willy's CJ3, that same day!

After the deaths of his mother and father Harry sought a change and in 1984 accepted a position with the Signal Corporation in Des Plaines, Illinois, just north of O'Hare airport. This was a short-lived experience, however, as Profs. Jim Wolfe and Jim McGrath convinced Harry to move to Blacksburg and become a Hokie in 1986.

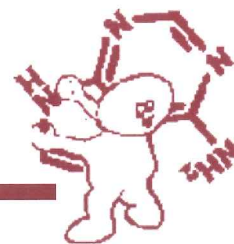
Harry is proud of his wife Beth for packing so often and raising their wonderful children so well. Kate is a graduate of the College of Wooster and works as a technical editor; she is also the mother of first grandchild Meg Pertchik, who along with husband/father Jeff Pertchik, is right here in Bburg! Son Mark is nearing his degree in Jazz Studies (guitar) at the University of North Florida in Jacksonville, supported by his wife, Claudia. Daughter Christie, a U VA graduate, is a writer, who is now on sabbatical here after working in Manhattan and climbing the ranks to become assistant editor of *American Heritage*, a Forbes publication; she and her husband Ben Oderwald are now seeking positions in their beloved New River Valley.

Harry's hobbies still include some sports, namely golf and swimming, as well as drumming with the world's great jazz and rock musicians (the latter on CD, of course) often accompanied by a fine cigar and/or a single malt whisky, and some fishing and photography.



HARRY GIBSON
& BETH HURLEY
1957

Alumni Highlights



Marie Krafft (B.A., '79, M.S., '80, Ph.D. '83) was recently elected as a fellow of the AAS. Marie is on the Chemistry faculty at Florida State University. She was recognized for her research in organic synthesis, particularly in developing synthetic pathways with unprecedentedly high stereoselectivity.

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Brian O. Bachmann – “Yes indeed, I was an undergraduate at Tech, Class of December 1992, where I worked extensively with T-Hud. I went on to do a M.S. with John Buynak at SMU in Dallas, and a Ph.D. at Johns Hopkins University with Craig Townsend in Baltimore. I then took a scientific position in industry at a Montreal Biotech company called Ecopia Biosciences, where I rose to the rank of Director of Chemistry. I just joined the faculty here at Vanderbilt as Assistant Prof.”

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J.W. Hellgeth, The SRN Company, LLC (Ph.D. '77) taught a workshop entitled “Chemical Identification via Diamond ATR Infrared Spectrometry” at the Federation of Analytical Chemistry and Spectroscopy Societies 30th Annual Meeting in October 2003 at Fort Lauderdale, FL.

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Mark R. Hammersla (Ph.D. '83) is president and owner of NSI Solutions Inc. (8304 Old Well Ln., Raleigh, NC 27615).

Tomas Hudlicky (B.S., '73) was appointed Canada Research Chair in Biocatalysis at Brock University. Tomas is the recipient of many prestigious awards; holder of eight patents; author of numerous articles; editor of several scientific journals; chairman of the organizing committee and founder of the Symposia on the Latest Trends in Organic Synthesis. His research involves converting aromatic compounds, often considered industrial wastes, into valuable pharmaceutical compounds. The work will lead to the manufacture of compounds needed by society, specifically related to analgesic, anesthetic and anti-tumor products – in an environmentally benign way.

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The Eastern Analytical Symposium AS 2003 meeting is scheduled for November 17-21 in Somerset, NJ. **Henrik Rasmussen** (Ph.D.'90) is President of the Eastern Analytical Society for 2003. Henrik works for R.W. Johnson Pharmaceutical Research and Development in New Jersey. His wife, Lenore, received a Ph.D. under the supervision of Jim McGrath.

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Jason Gilmore (B.S. '96, M.S. '98) – “Greetings... thought I'd take the time to thank and express appreciation for the new alumni sections of the chemistry department web page. A great feature and a good interface!”

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Marie Krafft – “I still think of my VT heritage – just don't start to beat us up on the football field. I have recently been promoted to a named professor so I am now the Martin A. Schwartz Professor of Chemistry.”

Jennifer Smith (Ph.D.'02) traveled to Nice, France for a poster presentation at HPLC 2003, an international analytical chemistry conference dedicated to developments in liquid chromatography. The poster was titled “Capacity Studies with Silica-Based Monolithic Columns.” Monolithic columns use novel chromatographic column support structures. Jennifer worked for Professor McNair.

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Mark Rohrbaugh (B.S. '79) notified the University that he has been appointed to the position of Director, NIH Office of Technology Transfer. As a student, he performed undergraduate research with Jim Wolfe. He went on to receive a Ph.D. degree in biochemistry from Penn State University in 1984 and a law degree (J.D) with honors from the George Washington University in 1997.

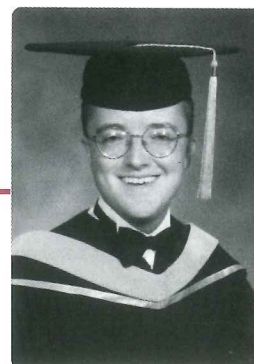
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Walter W. Zajac Jr. (B.S. '57) retired after 42 years of teaching and research in organic chemistry at Villanova University and is now professor emeritus of chemistry (96 Honeysuckle CT., New Holland, PA 17557).

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Nicholas Snow (Ph.D.'92) – “I will take over as chair of this nut house (*Dept. of Chem. & Biochem., Seton Hall Univ.*) and on Sept 1, I will be full Professor. Thank you and the Department of Virginia Tech for all of your support over the years.”

Jody A. Goad



Jody Aaron Goad (B.S. Chemistry, 1998) passed away Wednesday, July 9, 2003 at his parent's home in Hillsville, VA after a long battle with cancer. He was born on January 26, 1976 in Montgomery County, Virginia, to Jerry Ray Goad and Nada Edwards Goad. From the time Jody was only five years old, he was determined to be a Hokie. He saw a piece about VT on television and said to his parents, "That's where I want to go to college."

As Jody excelled through high school, friends and professors suggested that he apply to universities such as Yale and Harvard, but he simply replied with "Why, I wouldn't go there if I got in." When it came time to apply, he only applied to Virginia Tech, and it

was no surprise to anyone when he accepted.

He entered as a freshman wanting to be an environmental engineer, however after his first year he was bored. His general chemistry lecture with Prof. Patricia Amaties helped Jody to find his true calling as a chemist. He so enjoyed that class, he decided to switch to the Chemistry Department.

While in the Department, Jody made many contributions. He held several offices in Alpha Chi Sigma, the national chemistry fraternity, and led them to have the best professional activity in the nation. He also researched the faculty genealogy with the aid of Prof. Mark Anderson. His love of genealogy

stemmed from a project in his fifth grade class where he researched

his family tree. Ever since, he continued to research genealogy of any kind, including the professional genealogy of the faculty- tracing the professors all the way back to Boyle.

After his graduation in May 1998, Jody decided to pursue a Masters in Business Administration. He graduated in May of 2000 with a concentration in finance. From July 2000 until the time of his death, he worked with Celanese Acetate in Narrows, VA.



Anna J. Sequeria (PhD '91) was the recipient of the Forsyth Technical Community College's Excellence in Teaching award. This program was established by the State Board of the North Carolina Community College System to provide recognition to teachers who exemplify the highest quality and standards throughout the N.C. Community College System and instructors who have consistently demonstrated excellence in teaching to their students and college. She was selected as a semifinalist at the North Carolina Community College Excellence in Teaching State competition. In May, Anna was also a recipient of the 2003 NISOD Excellence Award in Austin, Texas. She earned her Bachelor of Science degree in chemistry and physics, her Master of Science degree in physical chemistry and a diploma teaching at the higher education

level from the University of Bombay in India. She has also taught in several countries throughout the world including India and Qatar. In Winston-Salem, she also worked as an analytical chemist at the Bowman Gray Technical Center and taught at Wake Forest University.

Doug Adams (BS, '71) recently returned to campus to be honored by the Blacksburg Sports Club. Although majoring in Chemistry, Doug was an outstanding swimmer. In 1970 he took 1st, 3rd, and 4th in the state meet, setting 2 VT records and one meet record in 100 and 200 breaststroke and 400 IM. He later earned a Master of Divinity from Lutheran Theological Seminary, Columbus, OH, and in 1987 a Doctor of Ministry from San Francisco Theological Seminary. From 1975-1997

he served as Pastor of Our Savior Lutheran in Lake Oswego, Oregon. He now pastors the Community of Hope Lutheran Church in Wilsonville, Oregon.

2003 Carl S. Marvel Creative Polymer Chemistry Award sponsored by Dow Chemical Co. to **James L. Hedrick** of IBM Almaden Research Center, San Jose, CA. James received a PhD under the mentorship of Jim McGrath. 2002

John Scott Award of the Board of Directors of City Trusts, Philadelphia to Joseph DeSimone, Department of Chemistry, University of North Carolina, Chapel Hill, NC. The award recognizes men and women who have contributed in some way to the comfort, welfare, and happiness of mankind. DeSimone was honored for his contributions to the manufacturing and processing of polymers in supercritical carbon dioxide. Joseph received his PhD under the direction of McGrath.

Donors

Appreciation is extended to all alumni, friends, faculty and organizations that have contributed to the Department of Chemistry at Virginia Tech over the years. Your gifts make a difference and can be designated for general department needs or specific programs and scholarships. The following names are donors for the period January 1, 2003 to June 30, 2003.

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Alumni Highlights Continued

"The Sale of our nonwoven apparel line allows White Knight Engineered Products to more aggressively pursue development of new woven products and continue its tradition of innovation in both product offering and value-added components of its business," explained **Scott Banks** (BS, '81), President at White Knight. White Knight Engineered Products provides high quality woven protective apparel for the controlled environments markets, as well as passenger comfort products for the airline industry.

Jennifer Kelly – "Thank you for thinking of me and keeping me in your prayers. I spent 4 days in ICU, 6 days in neuro science bldg, and 10 days in inpatient rehab at UNC after the accident. I'm now in Maryland with my mom working on outpatient rehab and still making great progress. Walking and jogging is back to normal and I can swim all 4 strokes again in the pool. I hope to make it back to UNC in August to take a class fall term and I'm really itching to get back in lab."

AN INVITATION TO BE PART OF SOMETHING SPECIAL



Virginia Tech's Department of Chemistry is known world-wide. Our faculty members are discovering cutting-edge technologies and creating innovative solutions. They are successfully collaborating, reaching across the disciplines and building partnerships with industry to produce results that impact society, improve lives and ultimately make the world a better place.

Students participate in hands-on learning with exposure to real-world business applications and the latest technologies for scientific investigation. Our commitment to our students is to create knowledge, to open their minds to that knowledge, and to enable them to make the most of their educational opportunities. Our goal is to graduate citizens who will be accomplished professionals and leaders in their fields, able to reason and problem-solve as well as communicate, adapt and innovate.

To accomplish our goals—to achieve Virginia Tech President Charles Steger's hope of becoming one of this nation's top research institutes and through that a top institute for graduate and undergraduate education—we need your support. Virginia Tech receives less than a third of its funding from the state of Virginia. To face the new challenges of today's global marketplace with increased competition for funds and students, we need you—business leaders, government officials, individual citizens, and alumni—to make a gift for our present and our future.

We've made every effort to make giving to Virginia Tech and the Department of Chemistry easy. You may choose to contribute in any of the following ways:

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- Visit www.givingto.vt.edu and make a gift online using a secure website.
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We also accept gifts of appreciated stock or gifts made through electronic funds transfer. Please call us to make arrangements. And don't forget that you may be able to double or triple your gift to VT through your employer's matching gift program! Whatever you do, please give. Your gift truly does make an impact.

The Department of Chemistry will use these funds for graduate student fellowships, undergraduate scholarships, and various program initiatives. We are also seeking special funds to equip the new Chemistry/Physics building and to establish chaired faculty positions.

For information about estate planning, special gifts, or anything else, please contact **Dr. Kylie Johnson, Director of Development for the College of Science at 1-866-401-9926 or 540 231 2551 or kyliej@vt.edu**. Thank you for your support.

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The Virginia Tech Department of Chemistry has a long history, a solid reputation and a bright future. Our courses provide the chemical foundation for all Virginia Tech science and engineering students and broaden their understanding about the structure and properties of matter. Our undergraduate and graduate degree programs prepare society's future chemists and scientists. Our faculty's research and scholarships generate and disseminate chemistry knowledge to the Commonwealth, the Nation and the world. And our outreach programs offer opportunities to share this knowledge with others, including practicing professionals, as well as primary and secondary school children. To achieve our mission, the Virginia Tech Department of Chemistry will continue to pursue multi-disciplinary research within and beyond the University, to find innovative ways to instruct students, to forge partnerships with industry and government and to establish a reputation as one of the world's highest ranking chemistry departments.

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