ELEMENTS

The Alumni Magazine of the Department of Chemistry at Virginia Tech

From the Department Chair - Dr. Larry Taylor

Dear Chemistry Alumni:

Please accept and read with interest Volume #6, Issue #1 of our departmental magazine, Elements. You, no doubt, have noticed the new look! The 7.5% budget reduction that the department was 'hit' with for FY 03 has caused us to bring the production of Elements in-house. Our Elements will not be as 'slick' but we can produce two issues per year for a small fraction of the cost of previous professionally produced Elements. In this way, hopefully you can stay better abreast of Hokie Chemistry at your alma matre.

Budget reductions and University re-structuring have occupied much of my time during the past seven months. The 7.5% reduction translated into a loss of $100,000 operating and $265,000 in appropriations for faculty salaries. The retirement of Harold McNair, the release of Jim Wightman from part-time teaching, the death of Frans van Damme, and the lay off of our Chemistry Learning Center Director afforded the required salary budget reduction. Staff and graduate student salary allocations were not affected, per departmental decision. With these state-mandated reductions, new faculty hiring has been frozen for the second year in a row. Class size in our physical chemistry lecture, as a result, has risen to near 100, for example.

"The College of Arts and Sciences was most affected by the restructuring."

A College of Science will go into existence on July 1, 2003 and will include Chemistry, Biology, Computer Science, Economics, Geological Sciences, Mathematics, Psychology, Physics, Statistics and Human Food, Nutrition and Exercise. The new alignment will enable units with similar issues to work more closely together in the university's pursuit of top 30 status. For example, the nine departments are the only ones in the former College to grant Ph.D. degrees and have a significant laboratory component. As you can imagine, there must be many meetings to carve out the administrative structure of the new college.

Regretfully, I must bring up more and more each year the question of money. As you have seen, we are under increasingly tight budget constraints, and have not had a significant increase in the non-salary portion of our budget for some years. All of us are being asked to give more to the causes of our choice, and I would ask that you consider the Department of Chemistry when you are deciding on your yearly donations. Your response in the past has been most gratifying and much appreciated. Gifts to the Virginia Tech Foundation are tax deductible and many companies provide matching contributions, allowing you to multiply the value of your gift. Address gifts/correspondence to the chair, Department of Chemistry, Virginia Tech, Blacksburg, Va 24061 or the VT Foundation, Prices Fork Road, Blacksburg, Va 24060.

I urge you to stay in contact with us via the departmental website (<http://www.chem.vt.edu>) and the link to 'Alumni News and Registration'. If you ever find yourself in Blacksburg, please consider stopping by the Department of Chemistry. We would love to show you the new chemistry-physics building that is under construction.

What's Inside:

CH EM IST RY

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What's New In Chemistry

Chemistry Remembers Glassblower Instructors

John Murray, who taught chemistry and glass-blowing at Virginia Tech from 1942 until retiring in 1971, died August 19 at the age of 93. His specialty was Physical Chemistry and General Chemistry. He made many valuable contributions to the junior physical chemistry laboratory which he taught for over ten years. Murray, a native of New York, held degrees from Colgate and Johns Hopkins. He served on the committee charged with building and maintaining trails at Warm Hearth Village and was very interested in the flora and fauna of that area. In his memory, donations can be made to the Nature Conservancy at 1233A Cedars Court, Charlottesville, VA 22903 or to Planned Parenthood at 2207 Peters Creek Road, Roanoke, VA 24017.

Frans Van Damme, a scientific glassblower and faculty instructor in the Department of Chemistry at Virginia Tech, died May 5 at the age of 70. Van Damme had been at Virginia Tech 35 years after doing glasswork in private industry and teaching at the University of Illinois. He served as supervisor of the Virginia Tech Glass Instruments Laboratory from 1967 until his death and taught Advanced and Intermediate Scientific Glassworking. Van Damme was born in Aalst, Belgium, and educated at the Kamerlingh Onnes Laboratory at the University of Leiden in The Netherlands. He also trained at Philips Electronics in Einhoven, The Netherlands. In his memory, contributions may be made to the Humane Society of Montgomery County, P.O. Box 287, Blacksburg, VA 24063-0287.

Chemistry Department Spring Graduation May 11, 2002

Bachelor's Degree

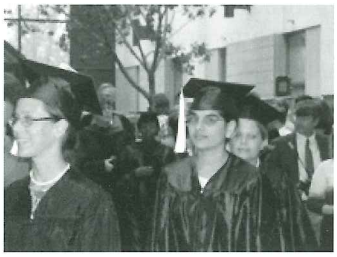
Tabassum F. Ahmed
Megan L. Boarman
Ksenia P. Brazhnik
Jason M. Cash
Bobby Lewis Cockram
Adrienne H. Crisp
Kindra P. D'Amico-Lynch
Katherine Anne Davenport
Carmen Angelique Davis
Williams Bradley Davis
Bruce Alexander Finlay
Tara D. Jensen
Jennifer Yvonne Kelly
Brian J. Levay
Jon Clifton Lewis
James Revere Lohr
Joseph Edward Lundy
Carrie R. Máiorana
Stephanie E. Matney
Ashley Brooke Mullins
Jennifer M. Quinn
Miral M. Patel
Amr Saad Ragab
Sukhmani Kaur Sarao
Sabrina Marie Segnere
Bryan David Shirkey
Heather June Alexander Snow
Shannon Marie Sprague
Jennifer Marie Sprouse
Andria E. Temple
Jeremy Mason Throckmorton
Kristopher Waynant
Cora M. Webb
Heather Lynn Winfree
Christopher John Wohl
Michael Philip Zwolak
Andrea Gale Zydron

Master's Degree

Shelby Fencil Shulfer – Prof. Morris

Doctor of Philosophy

Linda A. Harris – Prof. Riffle
William L. Harrison – Prof. McGrath
Anthony J. Pasquale – Prof. T. Long
Metha Rutnakornpituk – Prof. Riffle
Sandra Salido- Prof. Dorn
Diane I. Williams – Prof. Tissue
Cherese Winstead – Prof. G. Long



Research Expenditures

Based on a preliminary analysis of VT research expenditures for FY 2002, it looks like Chemistry was the top performing department!

Chemistry - $5,448,459
Civil Eng. - $4,832,630
ESM - $3,975,428
EcpE - $2,997,947
Crop & Soil Sci - $2,959,947

Support the Chemistry Department

A Virginia Tech student will be calling you in the next few months seeking support for the College of Arts and Sciences. If you would like your contribution to support initiatives in Chemistry, please tell the student caller you would like to designate your gift to the "Chemistry Department". Thank you so very much for your thoughtful consideration.

Carla Slebodnick - Co-Director-Crystallography Lab

Virginia Tech Crystallography Lab

The Departments of Chemistry and Geological Sciences have co-located their crystallographic facilities in the "Virginia Tech Crystallography Laboratory" or VTX (Derring 3076). The Crystallography Laboratory now includes 3 four-circle diffractometers for structure studies of single-crystals as well as facilities for experiments at both high pressures, and at low temperatures.

CHEMISTRY/PHYSICS BUILDING

The Chem/Physics Phase II Building construction project is approximately 6 weeks ahead of schedule.

Some history and timing: Two weeks before the bids for the new Chemistry building were to be sent out in the Spring 2001, the Governor froze all capital funds. Fortunately, in the Fall 2001 the economic conditions in SW Virginia prompted the Governor to release funds for the new Chemistry-Physics building. Bids were submitted promptly, a contract was in place by January 2002, and construction began in January-February 2002. Now 9 months into the project, construction is well underway and is progressing at a good pace. The anticipated completion date is January 2004. Considering the moving operation needed to get all labs into the building, testing the lab air handling systems, and other final details, it is anticipated that "test-practice" labs will be held in the new building in the Summer 2004, and the full schedule of labs will begin in the Fall 2004.

Some information: The total space for chemistry will be about 40,000 sq. ft. All undergraduate chemistry labs will be taught in the new building. The building space will be shared with physics – physics has the first floor and chemistry will occupy the top three floors: 2nd floor, general chemistry; 3rd floor, advanced chemistry, physical chemistry, and the Chemistry Learning Center; and 4th floor, organic and analytical. The labs will have dedicated instrumentation that will be specific for each lab. Some labs will have "break-out" or study areas where students and instructors can discuss experiments and plan individual investigations. The organic lab experiments will be conducted in hoods – each organic lab has 15 hoods! In the advanced chemistry portion of the building (3rd floor), inorganic and instrumental analysis will share facilities, and advanced organic and polymer chemistry will occupy joint labs. Each lab has an adjacent instrumentation suite and work area. The physical chemistry lab is also located on the 3rd floor and includes a dedicated computer/dry lab facility. Adjacent to the physical chemistry lab is a large instrument room in which commonly-used large instruments will be housed. Faculty members are currently busy developing laboratory courses and experiments to take advantage of the new lab facilities. They are also preparing proposals to acquire new instrumentation for the labs.

In addition to the labs, two 200 seat-lecture theaters, one for chemistry and one for physics, will be an integral part of this teaching facility. Additional lecture space for instruction of groups of about 15-20 will be available in smaller conference rooms. A "Distance Learning Facility" with space for about 35 individuals will be outfitted for on- and off-campus communication and will be particularly useful for teaching off-campus courses via satellite and for conducting teleconferences.

The new building will be a marvelous facility for undergraduate instruction and scientific discovery. We look forward to occupying the building, to the day when all chemistry labs will be taught under one roof, and to the time when all labs will have adequate and functional hoods allowing contemporary and novel instruction in the chemistry labs.

Accessible additional information and photographs: Architectural drawings and detailed information regarding the progress of construction (photos, comments, etc.) can be found on the Chemistry Department web page. The information can be accessed by following the instructions given below. The information is up-dated about once a week. (The efforts of Wanda Hensley are gratefully acknowledged for maintaining this portion of the web page): go to, www.chem.vt.edu; select, Department Information; select, Department News, Events, & Reports; select, Construction News; select, Photos of the New Building in Progress; select, Mini Presentation, or Aerial Photos, or One of the Chronological Summaries.

Mobile Chemistry Lab

The MCL has begun its third year of service to high school chemistry students in Southwestern, Southside, and Richmond Virginia. There are 43 schools in this area that the mobile lab will visit this year. During the past school year 9,510 students from 28 high schools conducted experiments on the MCL. In the first two years of operation, over 17,000 students have used the MCL. The MCL staff held three workshops for high school chemistry teachers this summer. The first workshop introduced 19 new chemistry teachers to the MCL program. At the Advanced Workshop, 6 chemistry teachers helped develop new experiments and refine existing ones for use in the MCL program. The third workshop introduced 12 teachers to the new ChemKit Program. The ChemKit program is a recent development and involves shipping complete experiments, including equipment and reagents, to participating high school teachers. Six different ChemKit experiments have been developed for this program. They were selected from prior MCL experiments that proved to be popular with teachers, but required little advanced chemical instrumentation. Unlike the MCL, the ChemKit program is available to any teacher in the Commonwealth. Professor Gary Long serves as Project Director for the MCL.

For more information, please visit the web site at http://www.chemistry.vt.edu/mcl.

People In The News

Crawford Lectures in Switzerland

Funding provided by the Virginia Tech Research Division through an International Travel Supplemental Grant (ITSG), the Camille and Henry Dreyfus Foundation, the Virginia Tech Department of Chemistry, and the College of Arts and Sciences enabled Professor T. Daniel Crawford to attend and give a lecture entitled "A Locally Correlated Equation-of-Motion Coupled Cluster Approach for Electronically Excited States of Large Molecules," (co-authors with Prof. Rollin A. King of Bethel College in St. Paul, MN) at the meeting of the World Association of Theoretically Oriented Chemists (WATOC) in Lugano, Switzerland, August 2-9, 2002. More than 600 scientists from around the world attended the congress in Switzerland.

Dorn Receives Patent

Chemistry Professor Harry Dorn and former post-doctoral associate Steven Stevenson, who is now with Luna Innovations, received a patent for a new family of molecules – metal filled fullerenes – that have the potential to be the backbone of many nanotechnology applications. The patent, "Endohedral Metallofullerenes and Method for Making the Same" (No. 6,303,760) describes trimetallic nitride endohedral metallofullerenes and their preparation. Luna Innovations, Blacksburg, VA, has licensed the technology.

Multidisciplinary DOD Grant Received

Tim Long and his co-investigators have been awarded an ARO MURI (e.g. Army Research Office Multidisciplinary University Research Initiative) grant. The proposed research efforts represent a multi-university and multi-disciplinary effort in novel branched macromolecules for DOD applications and technologies. Virginia Tech has partnered with Cornell University and Penn State University in this $3.75 M award for three years ($1.25 M per year) with the opportunity for renewal for additional years. The potential five-year award is approximately $6.25 M and Virginia Tech is designated as the prime institution. The co-investigators are Garth Wilkes (Chemical Engineering), Tim (Chemistry), Rick Claus (Computer and Electrical Engineering), Don Leo (Mech Eng), Geoff Coates (Chemistry at Cornell), and Ralph Colby (Materials Science ad Engineering at Penn State).

Carlier Receives Grant

Paul Carlier has been awarded a NSF grant (~$224,000) for work in chemical biology.

Ducker Receives Grant

William Ducker has been awarded, in collaboration with John Walz (Yale) a NSF MRI grant ($395,000) to build a new type of particle-force apparatus at Virginia Tech.

Graybeal Still Active in Phi Lambda Upsilon

Emeritus Professor and former Associate Head of Chemistry Jack Graybeal continues to be very active in Phi Lambda Upsilon at the national level. For the past six years he has served as National President of the organization. Prior to this position, Jack was the national Editor for six years and Treasurer for nine additional years. In addition, Jack was the faculty adviser for the Virginia Tech local group. Jack is to be commended for his over 20 years of service to the fraternity. Patricia Amateis serves as the local faculty contact on campus.

Etzkorn to Receive Grant

Dr. Felicia Etzkorn has received funding in the amount of $435,000 for a NIH Biomedical Research Instrumentation grant for purchase of an LC-MS-MS.

McGrath Receives Award

The Richard A. Glenn Award for the best preprint and oral presentation at the Chicago 2001 meeting of the ACS Division of Fuel Chemistry was awarded to Jim McGrath's paper "Chemistry-Morphology-Property Relationships of Novel Proton Exchange Membranes for Direct Methanol Fuel Cells" co-authored with M. A. Hickner, F. Wang, Y. Kim, B. Pivovar and T. Zawodzinski. A plaque and check for $500 was presented during the Orlando National ACS meeting. Michael Hickner presented the paper and is a Department of Chemistry graduate student working this semester at Los Alamos National Laboratories.

John Dillard carefully oversees construction of new building.

Jeannine Eddleton enjoys her instructor position.

JP Wightman joins the ranks of Professor Emeritus.

Paul Deck, Chair of the Graduate Recruiting Commitee is gearing up for the new year.

Alumni Teaching Award

Patricia G. Amateis received the University's Alumni Award for Excellence in Teaching. She comments, "Teaching is not merely a job ... it consumes my time and my thoughts."

McNair Staff Award

Given to a Chemistry staff member for meritorious service in behalf of the Department of Chemistry. Professor Harold McNair, who officially retired from the University Summer 2002 after 34 years, is the initiator and sponsor of this award. Larry Jackson is the recipient of this award.

Clifford Service Award

Given to a Chemistry faculty for extraordinary service in behalf of the Department of Chemistry and in honor of Professor Alan Clifford who untiringly served as Head of the Department from 1966 to 1981. A picture of Alan and his wife, Shirley, hangs in the atrium between Davidson and Hahn Halls. Jimmy Viers is the recipient of this award.

Faculty Research Award

The Cook Faculty Research Award was presented to Harry Gibson. Harry came to Virginia Tech in 1986 after a successful career in industry. He has over 300 peer-reviewed research publications in top journals, 33 US Patents, and has been invited to lecture on his research over 150 times all over the world.

Faculty Teaching Award

The Cook Faculty Teaching Award was presented to Karen Brewer. Karen joined Virginia Tech in 1988. For the past five years, she has taught the Inorganic Chemistry Laboratory course. Professor Brewer emphasizes not only the gaining of knowledge but the communication of that knowledge to others via the spoken and written medium.

Polymer-Magnetic Particle Complexes in Biotechnology

Magnetic fluids injected into the eye might someday help repair retinal detachment and prevent blindness. Professor Judy Riffle has found a way to envelop tiny pieces of cobalt or magnetite in silicone fluid, which could someday enable doctors to maneuver magnetized drugs to where they're needed.

The retina is the light-sensitive layer of tissue that lines the inside of the eye and sends images through the optic nerve to the brain. With age, the retina can peel away from the back of the eye. Without prompt treatment, retinal detachment can cause permanent vision loss. More than 10,000 people a year suffer the symptoms of retinal detachment -the sudden or gradual increase in the number of floaters and/or light flashes in the eye or the appearance of a curtain over the field of vision. If the retinal detachment is in a specific location or is very large, outpatient surgery is typically performed to force the retina back into place. Often, a small bubble of silicone fluid is injected, to weight down the retina and hold it in place. Patients are sometimes required to hold their heads awkwardly, sometimes forced to lie face down for days, to allow the bubble to settle until the retina reattaches, said ophthalmologist J.P. Dailey, who treats retinal detachments at a clinic in Erie, Pa. About a third of the time, the treatment fails, he said.

It was after such failed surgery more than nine years ago that Dailey read about magnetized fluids. He speculated that magnetizing the silicone would allow him to move the fluid around the inside of the eye, directly to the retinal tear, much as kids drag magnetic pieces around toy puzzles. The fluid could be held in place with an external magnet, without the face-down treatment, he believed. Dailey approached Professor Judy Riffle, who directs the school's Macromolecular Science and Engineering Program, to develop a magnetized fluid that would be biocompatible. She found a way to encapsulate tiny particles of cobalt and magnetite in the silicone, physically isolating them from the eye to reduce toxicity.

The magnetized fluid would be injected into the sclera, the outer protective white coating of the eye. A magnetized version of a scleral "buckle" - the narrow, supportive bands that can be placed around the eye - would pull the fluid to a specific site and push against the retina.

"If it works, it will be wonderful," said Dailey, who said he will test the toxicity of the magnetite-silicone fluid at Case Western Reserve University, where he is an assistant clinical professor.

Dailey said if the fluid passes toxicity and clinical testing, it could be available to patients in a couple of years. Riffle is expanding the research to develop magnetic microspheres that could be attached to specific drugs. The drugs could be directed by external magnets to certain locations around the body, such as tumor sites, Riffle said.

"Our lab's work may open the door for a whole host of new medical applications for magnetic nanoparticles," Riffle said.

McNair's Retirement Dinner

A Retirement Dinner and Celebration was held on June 13, 2002 for Dr. Harold McNair. Many of his former students were in attendance. Harold faithfully served Virginia Tech for 34 years in the College of Arts and Sciences. He was Department Head for three years. He pioneered the development of chromatographic science.

Student News


MAOP Group

2002 MAOP Group

The Minority Academic Opportunity Program (MAPO) is in part a summer research internship program for American undergraduates from minority, ethnic, or other under-represented groups. The department was fortunate to have five students. Professor John Morris oversees the program in Chemistry. Students with their advisors are listed below:

Adonis Ducre (Senior at Gambling State University) – Dr. John Morris

Beth Henry (Sophomore at Bluefield State College) – Dr. Rich Gandour

Kezia Sterling (Sophomore at Grambling State University) – Dr. Felicia Etzkorn

Kimberly Tetterton (Junior at Hampton University) – Dr. Paul Deck

Shawquia Young (Senior at Hampton University) – Dr. Paul Carlier

Former Teacher is Award Recipient

Susanne Dana is the recipient of the Virginia Blue Ridge Section 2002 Outstanding High School Chemistry Teacher Award. Ms. Dana has been teaching at Blacksburg High School since the fall of 2000. During the summers of 1996-1999, Ms. Dana taught organic chemistry at Virginia Tech. She played a major role in the development of thirty experiments that are included in the lab manual for the Virginia Tech Mobile Chemistry Lab Project. At the Virginia Association of Science Teachers conference in 2000, she offered two half-day workshops in the Mobile Chemistry Lab.

NSF Fellowship Award

Linda Harris (graduating in May from Judy Riffle's group) has been awarded an NSF post-doctoral fellowship to study with Tim St.Pierre's biomagnetics group in Perth, Australia for a year. The award is based on a proposal Linda submitted to NSF.

Iezzi Receives Fellowship

Eric Iezzi has been selected to receive an ACS Division of Organic Chemistry Graduate Fellowship, sponsored by Aventis Pharmaceuticals. This fellowship, in the amount of $20,000, is for the 2002-2003 academic year. Eric must agree to attend the 2003 National Organic Symposium, to be held in June, 2003, in Indianapolis, IN, and to present a poster based on his research.

Creative Young Chemist

Jim Hedrick (BS Chem, 1981, PhD Materials Engineering Science (MESC) VT 1985) has won the Carl Marvel American Chemical Society Polymer Division Creative Young Chemist Award for 2003. Jim has been at IBM Almaden for his whole career thus far, where he has generated more than 250 papers and 30+ patents. Jim worked under Professor Jim McGrath for his Ph.D. in the now discontinued MESC program.

ACS Student Affiliates

The American Chemical Society (ACS) Student Affiliates chapter at Virginia Polytechnic Institute & State University has been selected to receive an Honorable Mention award for its chapter activities conducted during the 2001-02 academic year. The award winning chapters will be honored at the 225th ACS National Meeting in New Orleans, Louisiana, on Sunday, March 23, 2003. Professor Carla Slebodnick, faculty advisor of the chapter, deserves special commendation. It takes more than exceptional effort to be an award-winning chapter; it takes the nurturing attention of a dedicated advisor. Professor Slebodnick's efforts certainly represent the best in undergraduate science education and mentoring around the country.

Academic Job Offer

Chemistry Department graduate student, Astrid Rosario, received an academic job offer for Fall 2002, from the University of South Carolina Spartanburg. The position is tenure track at the assistant professor level, is close to her home (Atlanta) and is surrounded by numerous polymer companies.

Award's Ceremony

Academic Excellence Award - Tabassum Ahmed, Ksenia Brazhnik, Leslie Dove, Andrew Fenley, Jennifer Kelly, Brian Levay, Carrie Maiorana, Sabrina Segnere, Heather Snow, Jennifer Stockdill, Katie Styer, Christopher Wohl

American Institute of Chemists Award - Christopher Wohl

James Lewis Howe Award - Brian Levay

Hypercube Scholar Award - Sabrina Segnere

The Merck Index Award - Jennifer Stockdill

Phi Lambda Upsilon Award - Katie Styer

Undergraduate Research Award - Sara Anderson, Rebecca Obeng

Analytical Chemistry Award - Jennifer Trent

CRC Freshman Chemistry Achievement Award - Juli-Anne Cantwell, Virginia Syptak

Viers Achievement Award - Jennifer Showalter - Instructor: Carla Slebodnick

Graduate Teaching Assistant Award - Anita Carmichael, Jeff Clark, Jennifer Kile, Stephanie MacQuarrie, Mary Tam, Mike Vadala

Graduate Research Awards - Robert Friedline, Eric Hawrelak, Erick Iezzi, Jason Jones, Emre Isin, Jeremy Lizotte, Belhu Metaferia, Xiaodong, Jane Wang

Graduate Service Awards - Jason Jones, Aysen Tulpar

Faculty Profile

An Emeritus' Decade

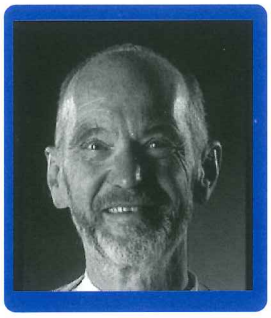
A decade ago Ray Dessy chose to assume Emeritus Professor of Chemistry status. At that time the Commonwealth, like all organizations, was experiencing one of its periodic fiscal crises. His motivations, stated at that time, were three in number: (1) to create professional and physical space for younger colleagues, (2) to partially disconnect while he was "ahead", and (3) to attack some research problems that were too risky for assignment as Ph.D. topics. How has it all worked out? Read on!

By 1992 Ray's group had been the home for an extended Family of ~100 doctoral level students and they had published over 250 papers. Since then Dessy has continued to publish in chemical instrumentation and computer applications. He is on the editorial or advisory boards of *Analytical Chemistry*, the *Internet Journal of Chemistry* (http://www.iic.com/), and the *Journal of Laboratory Automation* (http://labautomation.org/journal.htm). Ray has lectured at International Conferences on Information Technology and Biosensor Development in Oxford, London, Chicago, Bonn and Irsee (Germany), Washington, Adelaide (Australia), and Andover, NH (Gordon Conference). He has presented seminars at labs like the National Institutes of Science and Technology, Los Alamos National Laboratory, the National Institutes of Health, and the Naval Research Laboratory. But these are activities that Universities normally expect of its Emeritus Professors.

More importantly, Ray is still in the lab and classroom, with undergraduate students. Since his retirement he has taught six Honors Colloquium, four on "Internet Impact" dealing with the social, economic and political effects of the WWW. Two more were collaborative courses with Prof. Jerald Robinson of the Pamplin College of Business on "Globalization and the Changing Work Place," and with Prof. Maria Papadakis, Professor of Urban Affairs and Planning, Director of the Institute for the Social Assessment of Information Technology dealing with "Society and Information Technology." These Honors' classes serve the top 1% of our students and Ray comments, "When today's students are good, they are better than my generation." Dessy has also taught in two "Career Development" courses for our chemists and has now passed that course over to Paul Deck.

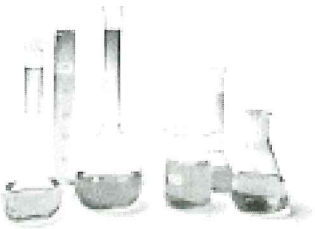
Ray also still writes proposals. He has received equipment funds from the Jeffress Foundation (2000-2003) to continue his long term passion in developing an X-Y addressable Surface Plasmon Resonance (SPR) Biosensor for use in pharmaceutical high-thruput-screening (HTS) and application in high-impact- (bio)terrorism (HIT) events. In 2002, the Camille and Henry Dreyfus Foundation awarded Dessy one of its ten Senior Scientist Mentor Awards (2002-2004) for support of undergraduate student research. The Dreyfus Foundation feels that active Emeritus Professors provide ideal venues for young scientists to learn about how science and research really work.

Three undergrad students have already produced publishable and patentable intellectual property this summer in his labs. Jennifer Haas is a chemist who wants to go to graduate school in neuropharmacology, Jeff Watkins, a physicist, wants to pursue a Ph.D. and teach at a University, and David Berry, a Materials Science Engineering student, will pursue an MS degree in MSE. Next year students such as Nan Zhou, who already has degrees in international fiscal matters, political science, and is pursuing a dual major in electrical and computer engineering, will join them.



Dessy is also collaborating with Prof. Carlos Suchicital in MSE on the development of facilities and instructional materials for a course in metallo-organic chemical vapor deposition (MOCVD) techniques for fabrication of microscale sensor materials. MOCVD technology represents the new cutting edge of the semicon fab area, which began with Si and GroupIII/V materials. But now the chemist is needed to help build needed new materials. Dessy worked on organo-metallic compounds during his early years at Tech.

For Ray, it is a satisfying time, enjoying contacts with our new faculty and seeing them develop national reputations. He comments "This phase of my career allows me to reflect on what Tolstoy said; 'The Truth- I care a great deal.'" He now understands the poet who commented on the experiences of those "who bare their brains to heaven." Ray feels "Science can be fun if we let it lead us."



Staff Spotlight

Linda Sheppard

This newsletter highlights one of our most loyal and excellent staff. She is Linda Sheppard, Administrative Assistant to the Department and Secretary to the Chair and Chief Financial Officer. Linda joined the Department of Chemistry on January 18, 1990 having transferred from the Department of Physics. Even though she can't wait to retire and be a full time grandmother, Linda appears to love her job and the staff she supervises love her. The Department Chair would be totally lost without her services. She makes good decisions – confidential matters are handled discreetly. She is an excellent assistant in planning departmental events – gives great support to the Chair in numerous projects. She maintains excellent contacts with Department Advisory Council and provides invaluable feedback to the Department Chair.

Donors

Appreciation is extended to all alumni, friends 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, 2002 to June 30, 2002.

GENERAL FUND

Alumni

Steve Unger
Edith Marsh
Jody Goad
Campbell Epes
Paul Corey
Michael Glasgow
Kelly Vidunas
Anonymous
Issac Andrews
Maria Arner
Frank Akers
Nicolas Pappas
Sherri Sale
John Waymack
Michael Macon
James Blair
Elbert Cook
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Kathryn Lysko
Margot Krauss
Michael Furness
Eileen Hensley
Gerard Donahue
Ipin Guo
Martha Ryhanych

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Harry Gibson

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Chevron Texaco

SPECIFIED FUNDS

Alumni

Robin Kinser
Daniel Ko

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Don Lee
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Philip Morris Co.
Novartis Pharmaceutical

FRIENDS OF CHEMISTRY SCHOLARSHIP FUND

Alumni

William Starnes

Friends

Gordon Yee

Class Notes

"I regret to inform you that I must tender my resignation from the Chemistry Department's Advisory Council. I am honored to have been a charter member of the Council and I have thoroughly enjoyed participating in its activities for the past four years. It was a genuine pleasure for me to visit the campus and to be engaged once again in the functions of the department." Gene Weedon, BS 1960

"Since I will become chair of my home department at The University of Alabama in mid-August, I fully expect that serving on the Virginia Tech DCAC will give me fresh ideas for improving my own department." Joseph S. Thrasher, BS 1978, Ph.D. 1981

"Currently, I am working for Eagle Ottawa LLC., as a technical coordinator between US headquarter and Japanese automotive OEMs." Shigeo Mori, MS 1995

"Currently an instructor at Duke University." Christopher P. Roy

"I am currently a graduate student in chemistry at UNC Chapel Hill pursuing my Ph.D. under Prof. Joe DeSimone." Jason Rolland

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