chemistry *distillations*

The Newsletter of the Department of Chemistry, The College of William and Mary

Fall 2005
www.chem.wm.edu

Bob Pike, editor
Louise Menges, layout

Remarks by the Chair

Well, it's been quite a ride over the past four years as chair of the department, and I would guess, assume, speculate that this will be my last letter as chair to what have to be some of the most impressive indivduals I have ever had the privilege of knowing during my tenure at William and Mary. When I became chair, there were too many goals I wanted to achieve, but I feel that we have made some significant headway in certain areas, especially with respect to improvements in the department's infrastructure while still enduring stagnant budgets. Over the past four years much of our instrumentation has been converted from obsolescence to state-of-the-art equipment, our latest additions being a new TGA, GC with FID and ECD (thanks to the generosity and understanding of the College administration), and a new X-ray crystallography system funded in part through the NSF (many thanks to Bob Pike for his perseverance in obtaining this grant). We are also now on the verge of groundbreaking for the new addition (see associated article) that will house the department in its entirety (the current Rogers Hall in which many of you spent many "treasured" hours will be deservedly gutted to provide space to biology and psychology). Our faculty is now more diversified than any time in its history, with two tenured and one tenure- track women faculty members.

I am always astounded to learn how many alumni this newsletter goes out to (currently over 1800), a statistic almost beyond comprehension given the size of the undergraduate class at William and Mary, but for me, one that is easy to understand given the time and energy that our faculty have invested into your education over the years. The number of majors we graduate each year continues to be impressive. A total of 57 chemistry majors were conferred degrees this past academic year, with 49 receiving ACS certifications. The latter is truly a phenomenal statistic given that research is not required for the major, yet this number chose to complete a minimum of three credit hours of research over the academic year (in reality, the number averages out to ~4.8 research credits/student for the year). Our summer undergraduate research program continues to flourish (48 this summer), with several students supported through alumni donations and endowments to the department.

Our faculty continues to be supported through a wide variety of federal, state, private, and corporate sources (over $845,000 awarded over the last calendar year). Out of this funding, over $104,000 was used solely to support undergraduate summer stipends this year, a truly impressive commitment by our faculty to undergraduate research. The ultimate goal of research is to be able to disseminate useful scientific information to the scientific community, and our faculty continues to excel in this area, given the nature and spirit of our program. Last calendar year, a total of 19 peer reviewed publications were produced, with 52 undergraduate and 8 graduate citations as co-authors. Approximately 45 presentations or invited talks were made at regional, national, and international conferences, with 76 undergraduates cited as coauthors. I made this statement last year, and feel compelled to emphasize again that I am convinced that one would be hard pressed to find another institution of comparable size (and in many cases ones larger than William and Mary) which consistently makes such an outstanding commitment to undergraduate research and education in chemistry.

The growing research expertise of the College has led to the ability of faculty to license innovative technology developed in their research labs through the College. Last year we highlighted the efforts of Bill Starnes in developing a new class of organic stabilizers for PVC products to replace heavy metal additives typically used as heat stabilizers. We are delighted that Bill's patented process is the first such technology transfer to be licensed through the College. A commercial product could ultimately lead to royalties to benefit both the College and the department.

This year we find ourselves in the unusual position of having only one tenure-track faculty remaining out of sixteen, which I guess speaks highly of our ability to attract and retain exceptional younger faculty. This year, Lisa Landino and J.C. Poutsma were both awarded tenure by the College, and we look forward to having them in the department for many years to come. One attribute of the department I have not really mentioned in past letters is that we are extremely lucky to have a very dedicated and conscientious staff to keep the faculty in line. Ted Putnam does his best to keep our ailing building functioning and processing countless ma-

terials and equipment orders; Lynda Stitzel and Derhong Shieh do a phenomenal job in running the large lower division labs; Louise Menges does about anything and everything asked of her, including this newsletter, and Pat Hilger and Linda Savedge provide exceptional administrative support.

On a sad note, we recently mourned the passing of a former secretary, Betty Chess, and an administrative assistant, Alice Philips. I never knew Betty, and most students wouldn't have known Alice, but she was one of the first people I came to know when I arrived here, and one I kept in touch with over the years, even after her retirement a number of years ago. If there was ever anyone who reminded me of my grandmother in my days as a youth, Alice fit that persona to a tee.

Many of you may be aware that the College just passed the $400 million mark in the recent campaign, a truly exceptional show of generosity from our alumni and other supporters of the College. With state support to the College at an all-time low (~19% of the total budget), our aspirations to become a more research oriented institution, and the charter initiative that provides more fiscal independence for some state institutions, support from our alumni is becoming more critical to maintain and enhance the education of future generations. Nevertheless, where all of this money goes continues to be somewhat of a mystery to us, and clearly it appears to be protected in such a way that the shortfalls in the budget for our new building could not be reconciled through such funds. Over my tenure as chair, our operational budget has been virtually the same every year, but we are experiencing double digit inflation in materials, something that many of you certainly can understand, given the nature of our discipline relative to consuming energy intensive products. We probably average about 25–30 donations per year from chemistry alumni directly designated as gifts to the department. Last year we received donations totaling ~$7500, which have been used in part to support the purchase of badly needed equipment and for stipends for the summer undergraduate research program. We anticipate that our needs will grow even more when we move to the new building and the number of majors undoubtedly increases (a phenomenon experienced when the current Rogers Hall opened), thus I fear the level of support we can provide to our students will diminish without additional external support. I am not making a plea, nor do I make a habit of begging, but you can be sure that if you make donations to the College earmarked specifically for the Department of Chemistry, those funds will be used in the most fitting way possible to benefit our students. For example, several alumni and supporters have developed endowments that currently, or upon fruition, support stipends for the summer program. These include the Allison, Cranmer, Greene and Schiavelli endowments, but a significantly greater number would provide opportunities for even more students for the summer program. Our biggest objective when we move to the new building will be to purchase a new 600 MHz NMR, which will require either a sizable chunk of change, or, if we are really lucky, maybe the College will find the resources for such a purchase as a house warming gift. Anything and everything that you contribute to the department ultimately makes a difference, and it certainly makes the chair's job a little easier to make sure that we can provide every resource possible to our students.

Last year I mentioned that I wrote most of my letter while at the beach; however, this year I'm doing this over a weekend at home with the AC cranked up to mitigate the relentless heat and humidity that we seem to be plagued with this summer, although my vegetable garden is thriving! You may be thinking that's why he seems so cranky, but in reality, I can't think of another institution where I would rather be, and that is **solely** based on the phenomenal students that grace our lecture rooms and research labs on a daily basis. I hope that many of you will take advantage of our evening get together of chemistry alumni over the homecoming weekend, as we always look forward to hearing about the your success stories. Even if that is not possible, please drop us a note via a letter or e-mail to the addresses provided in the newsletter so we can tell everyone in the next edition what you're up to in the "real" world. This will probably be my last opportunity as chair to reemphasize to those of you who went through the "experience" of having me as a teacher that many of you will ultimately realize that your years at William and Mary were probably the most independent and "care free" years you will ever have in life. I hope you have had the opportunity to savour those times, and more importantly, I hope that you are now in the position to share your knowledge, growing wisdom, and natural abilities with a society that desparately needs your help. See you on the flip side.

Cheers, ***Gary Rice***

From the Editor

It's newsletter time again and as editor I'll take the opportunity to offer a few thoughts about the educational process here in the Chemistry Department. One of the keys to effective education is to know who it is you're teaching. Our students are, without exception, an intellectually gifted bunch. They are also self-selected by their interest in chemistry and associated disciplines. But aside from these superficial similarities, our students are actually a pretty diverse group. Our graduates have gone on to careers in medicine, teaching, forensics, law, beer-brewing (see *News of Our Alums*), dancing, bread-baking, fashion design, midwifery, environmental engineering, and many others. Maybe the only way to distinguish them from the public at large is to ask them to pronounce the word "unionized". (If you think the answer has to do with organized labor, how did you get onto our mailing list?)

How does the diversity of our students relate to the education process in our department? Well, for me it serves as a reminder that most of our students are not going to "grow up" to become me. This sort of reality check is important since I think that chemistry education and research is pretty much the best job there is. Nevertheless, it is the pinnacle of egoism to think that everyone should follow the road I've taken. Still, for most of us in the Chemistry Department, this is the only job we've known. Our knowledge of the many career paths open to our students is necessarily limited by our own experiences. This is why it is of great importance that our department should continue its practice of including non-academicians in the schedule of seminar speakers each semester. After all, our job is to help in opening our students' eyes to a world of career possibilities.

As to the curriculum itself: any chemistry student will tell you that there's a veritable avalanche of factual and theoretical material that we heap on our students during their four years here. The usefulness of much of this material to our students in future years will depend upon their various career tracks. But in my opinion, the two most valuable things that we can pass on to our students are our thirst to know and our approach to problem-solving. This is why there is no substitute for the research lab in chemistry education. Students are stunned each year to hear me say, in effect, that I have no idea why a particular result occurred. (The next thing they hear me say is that we're going to do our best to find out why it occurred.) While it may be troubling to hear that someone with a Ph.D. cannot explain every possible result in the lab, I hope the students are encouraged to see that an education in chemistry is a great starting point for life-long learning and problem-solving. No matter where our students find themselves after they leave the College, I am confident that these skills will serve them well.

Bob Pike

Here is our latest departmental picture, taken for the Colonial Echo earlier this year. Seated, from left: Rob Hinkle, Lisa Landino, J.C. Poutsma, Ted Putnam, and Elizabeth Harbron. Second row: Der-hong Shieh, Lynda Stitzel, Louise Menges, Pat Hilger, and Bob Orwoll. Third row: Bob Pike, Bill Starnes, Dick Kiefer, Dave Kranbuehl, Dave Thompson, Gary Rice, Randy Coleman, Steve Knudson, and Cary Bagdassarian. Of course, we are never quite able to get everyone together at once for a departmental photo, and missing this year are Chris Abelt, Debbie Bebout, Gary DeFotis, and Linda Savedge.

Current Faculty

Chris Abelt, organic
cjabel@wm.edu

Carey Bagdassarian, biophysical
ckbagd@wm.edu

Debbie Bebout, biochemistry
dcbebo@wm.edu

Randy Coleman, organic, biochem
racole@wm.edu

Gary DeFotis, physical
Garrett-Robb-Guy Professor
gxdefo@wm.edu

Elizabeth Harbron, organic
ejharb@wm.edu

Rob Hinkle, organic
rjhink@wm.edu

Steve Knudson, physical
skknud@wm.edu

Dave Kranbuehl, physical, polymer
dekran@wm.edu

Lisa Landino, biochemistry
lmland@wm.edu

Bob Orwoll, physical, polymer
raorwo@wm.edu

Bob Pike, inorganic
rdpike@wm.edu

J. C. Poutsma, analytical
jcpout@wm.edu

Ted Putnam, dept. administrator
tdputn@wm.edu

Gary Rice, analytical, chair
gwrice@wm.edu

Bill Starnes, polymer
Gottwald Professor
whstar@wm.edu

Dave Thompson, inorganic
Chancellor Professor
dwthom@wm.edu

Emeriti

Alfred Armstrong, 1976

Ed Katz, 1980

Cirila Djordjevic, 1992

Trevor Hill, 1992

Dick Kiefer, 2003
rlkief@wm.edu

Faculty News

Promotions

Lisa Landino (Associate Professor)

J. C. Poutsma (Associate Professor)

Hearty congratulations are in order for Lisa Landino and J.C. Poutsma upon being awarded tenure and promotion to the rank of Associate Professor. Debbie Bebout hosted a party in their honor this past spring. Creative as always, Debbie produced this graphic, casting J.C. and Lisa in the roles of William & Mary. The careful reader will note that as William of Orange, J.C. sports the bigger coif (as is true in real life).

On leave for 2005–2006

J. C. Poutsma

Part-time faculty, 2005–2006

Homer Smith (Fall 2005)

Kathy Sturgeon (Fall 2005)

Dick Kiefer (Fall 2005)

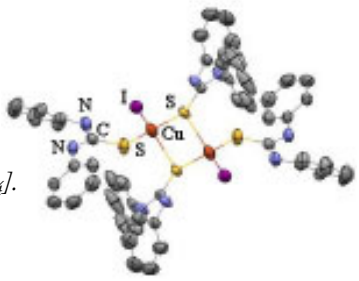
Farewell to Steve Berry

Camille and Henry Dreyfus Fellow Steven Berry has bid the chemistry department adieu. During his two-year appointment in Debbie Bebout's research lab, he prepared many new biologically relevant coordination compounds of Zn(II), Cd(II) and Hg(II) and characterized them by solution NMR methods and X-ray crystallography (in collaboration with Raymond Butcher at Howard University). He also inspired numerous students in Chem 103, 151, 414 and 420, and in the Bebout laboratory. Steve returns to his hometown and alma mater as a tenure-track Assistant Professor at the University of Minnesota-Duluth, where his research will focus on novel lanthanide complexes and the design of metalloproteins.

Departmental News

X-Ray Diffraction Comes to the Chemistry Department

The Chemistry Department is happy to announce that we now have our first X-ray diffractometer: a Bruker-AXS SMART Apex II instrument, which was installed in Rogers Hall this past June. Since X-ray wavelengths are similar to the size of atoms, X-ray diffraction is a very powerful and important technique for structural characterization, leading to applications in all of the physical sciences, but particularly in chemistry and materials science. Researchers in the Chemistry Department plan to use this new machine to determine the structure of small molecules and to characterize solid materials, such as polymer composites, metallized polymer films and metal oxide polymer additives. We are grateful to the National Science Foundation for Funding (CHE-0443345) and matching monies provided by the College.



The first molecular structure solved on the new instrument: $[Cu_2I_2(N,N'\text{-diphenylthiourea})_4]$.

The Chemistry Department's X-ray diffractometer.

In this architect's rendition, the Integrated Science Center is viewed from Barksdale Field. Rogers can be seen on the right.

Here the building is seen from the opposite end, as it extends down the slope toward Landrum Drive and Crim Dell.

Integrated Science Center

So the first question you have to be asking yourself is "what is an integrated science center?" Well, up until about eight months ago we didn't know either, but the vision of the College is to now consolidate a number of the sciences in a multi-phase project that will provide for enhanced collaborations and interdisciplinary initiatives. Fortunately, our department will be the first to occupy the initial phase of this project, slated to begin construction in the beginning of 2006 and projected to be completed sometime in early 2008. A new four-floor wing will be attached perpendicular to the west end of Rogers (the end adjacent to Millington) and extend all the way down to Landrum Drive. Chemistry will occupy the middle two floors, a new vivarium will be on the ground floor, and biology research labs will be on the top floor. While the overall floor plan and space is less than ideal due to budget constraints, the overall value of the project to the future of the department at least provides some compensation. All faculty requiring laboratory research space will have a minimum of ~920 nsf, a far cry from the cramped quarters many of you may remember from your research experiences in the department. All lower level teaching labs will have one hood for every two students, thus your fond memories of the odors wafting into the hallways of Rogers on a weekly basis will truly be a thing of the past. Five separate instrument rooms will be provided for spectroscopy, GC-MS, polymer, X-ray, and specialty instrumentation. The NMR facility on the ground floor will have space for two systems. The air handling system of the building will allow for additional hoods in the future as faculty needs change. There will be numerous alcoves and a large open area on each floor for students and faculty to gather. Faculty offices will be clustered equally on two floors relative to assigned research space. While this may seem like a very large expansion, in reality the budget constraints have reduced the overall dimensions of the building to ~300 × 80 feet. If you can imagine looking down the current Rogers Hall and adding another 120 ft, that will be the length of each hallway; certainly long enough to do windsprints and keep the faculty in shape. We hope to post schematics of the floor plans for the new addition on the department's web site in the near future if you would like to see what is planned and monitor the progress as construction begins.

While we were hoping that the budget would also encompass those features one would expect in a modern lab facility (central air, nitrogen, natural gas and vacuum services as well as liquid nitrogen services and more hoods), only vacuum and air services could be provided to a very limited extent. The total hood count for research labs is only one more than we currently have. We can still look forward to a modern facility where the ventilation actually works and faculty members will have the ability to expand their research groups and efforts through significant expansion of space, but to call this a state-of-the-art facility is somewhat a stretch of the imagination. The original budget projected for the expansion and renovation of Rogers and Millington Halls when the bond referendum was passed in 2001 was considerably smaller than the real dollar construction expenses of today. Unfortunately, the College cannot completely reconcile the substantial shortfalls with available private monies, although we are very grateful to the Dean and Provost for doing everything within their powers to provide adequate funding. A new state-of-the-art facility with all the standard features one would expect in an academic research facility was just opened at another state school with a far less reputable research program and less than a third of our majors. In addition, they were provided with an equipment budget that allowed for the outright purchase of a 600 MHz NMR and other large ticket instruments. We are still optimistic that between the Development Office and the administration, the means will be found to provide us with a state-of-the art facility as well.

Faculty Research Profiles

Randy Coleman

In one sense, my research can be summed up in the title of a sussessfully-funded research proposal, "Computational Approaches to Neurochemistry: Biochemical Studies of G Protein-coupled Receptors via Simulation and Modeling". As this title suggests, I am now engaged in research that models the internal biochemical signaling pathways of neurons. The proteins of most interest to me are those neurons in the central nervous system that use G Protein-coupled receptors as part of that signaling activity. Specifically, we are modeling neurons that use either glutamate or γ-amino butyric acid (GABA) as the neurotransmitter signal. These neurons are found in many locations in the brain (CNS), but the location of most interest is the hippocampus. It is in this region of the brain that learning and memory, emotional responses, addictive behavior, and many common neurological diseases such as Alzheimer's disease seem to have their origin.

Our goal is to model these neurons and then look at simulations of biochemical activity as we vary parameters in the biochemistry, always searching for unusual sensitivities and emergent properties in the system that have the potential to be exploited pharmacologically. We, likewise, are engaged in modeling the neurotransmitter interactions with the cell surface protein receptors to determine how the strength of that surface signal changes the ultimate neuron response. Our approach here is to study the binding interactions of neurotransmitter analogs or antagonists using protein docking software.

To this date this study has been supported by $40,000 from the Jeffress Memorial Trust Fund.

Gary Rice

Our research continues to focus on environmental areas, in particular providing services to the Department of Environmental Quality for the State of Virginia. Essentially, we are responsible for providing trace analysis of heavy metal concentrations for fish and sediments collected from virtually everywhere throughout the state on an annual basis in conjunction with organics analysis at VIMS/SMS. These assessments involve the utilization of several instrumental techniques, including heavy use of flame and graphite furnace atomic absorption and dedicated atomic fluorescence instruments in our lab for arsenic and mercury determinations. We are now in the process of incorporating microwave digestion techniques as well. These contracts with the state have resulted in an average of over $60,000 annually that is used to support 3–4 undergradute summer stipends every year and purchase new state of the art instrumentation. In fact, if you regularly read any Virginia local paper that reports DEQ advisories for limited fish consumption from specific areas due to high mercury levels, that data is being generated in our lab. And believe me, there are some pretty bad areas within the state! We are hoping in the near future to begin a project for the U.S. Fish and Wildlife Service for samples they are collecting from the Great Dismal Swamp basin to assess potential harm to predatory birds and mammals whose primary diet is small fish with potentially high mercury levels.

We are also focusing on new research areas for improved methods of methlymercury determination in fish tissue. Many of the newer methods rely on integrating highly specific and expensive detectors to GC systems. We are currently developing techniques as well as investigating new derivatizing agents using a variety of tetraalkyl or phenyl borates with specific functionalities we hope will provide comparable limits of detection using more conventional detectors such as GC-MS or GC-ECD. The most challenging aspect of reaching our goals thus far has been synthesis of the derivatizing agents (never thought I would have students doing organic synthesis!) and more reliable isolation from fish tissue (don't believe that everything you read in the literature actually works).

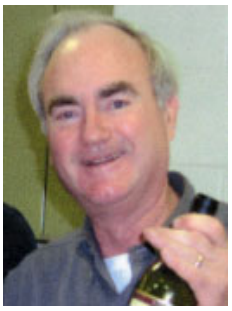
Elizabeth Harbron

We are interested in using light to control the fluorescence properties of conjugated polymers. Conjugated polymers tend to be highly photoluminescent and electroluminescent and are of interest for a variety of applications, most notably polymer light-emitting diodes. Our initial efforts have focused on poly(*p*-phenylene vinylene) (PPV) derivatives with alkyl-tethered azobenzenes in their side chains. In solutions prepared in the dark, the azobenzene side chains are predominantly trans. Trans→cis

photoisomerization occurs upon irradiation with ultraviolet light, and cis→trans back-isomerization occurs upon visible light irradiation or thermally. We determined that both isomeric forms of the azobenzene can act as energy transfer acceptors for the PPV backbone but that energy transfer is more efficient to the cis isomer than to the trans. This differential in energy transfer efficiency enables modulation of the PPV fluorescence intensity, i.e., we can control the intensity of polymer backbone fluorescence by controlling the isomeric form of the side chain with light. More recently, we have determined that we can also change the fluorescence color by inducing azobenzene photoisomerization under certain conditions. We plan to extend these studies to films as well as to other PPV derivatives with alternate photochromic side chains.

Selected Recent Publications

E. Harbron, D. Vicente (B.S. '05), M. Hoyt (B.S. '04) "Fluorescence Modulation via Isomer-Dependent Energy Transfer in an Azobenzene-Functionalized PPV Derivative," *J. Phys. Chem. B* **2004**, *108*, 18789-18792.



Dave Kranbuehl

Our research during the past 3 or 4 years has included molecular dynamics computer simulations with Prof. Bagdassarian on the important role of the motion of the long protein chains surrounding the active enzymatic site. We also have worked with Prof. Hinkle to develop a color changing sticker which would turn red after an amount of time indicating a food, drug or visitor pass was expired. Current work is also a team effort as we work closely with the French University in Lyon and with the major oil companies of the world, Exxon-Mobil, Chevron-Texaco, BP-Amoco, Shell, Total, Statoil, Petrobras in Brazil and Woodside in Australia. This work focuses on determining how long the polymer barrier will last in the flexible pipes which transport the hot (from geothermal depths) corrosive and explosive gas-oil-water mixture from the ocean floor to floating platforms. Another project involves characterizing the very fast, several second, rate of reaction as a function of thickness, chemistry and masking conditions during ultra violet light initiated cure. A very new and exciting area of research is characterizing and controlling the growth, size and inter particle distance of metal nanoparticles in all types of polymers. We continue to develop micro sensor techniques which actually monitor the changing state of a coating, adhesive, or composite resin during fabrication as well as how it holds up during use in the field.

Selected Recent Publications

Z Guo (M.A. '02), H. Sautereau, D. Kranbuehl, "Structural Evolution and Heterogeneities Studied by Dielectric Sensing in Styrene/Dimethacrylate Networks" *Macromolecules* (in press).

Y. Zhang, J. Doo, D. Krouse (B.S. '04), D. Kranbuehl, "UV Induced Film Formation as a Function of Film Thickness and in the Adjacent Dark Non-irradiated Regions" *Am. Chem. Soc. Symp. Ser.*, book on film formation (in press).

E. Espuche, L. David, C. Rochas, J.L. Afeld, J.M. Compton, D. Scott Thompson (B.S. '94, M.A. '96), D. Thompson, D. Kranbuehl, "In Situ Generation of Nanoparticulate Lanthanum (III) Oxide-polyimide Films: Characterization of Nanoparticle Formation and Resulting Polymer Properties" *Polymer* (in press).

N. Jones (B.S. '00, M.S. '02), A. Meyer (M.A. '99), S. Lyle (B.S. '03), M. Clark (B.S. '04), D. Kranbuehl, "Laser Light Scattering of Size and Molecular Weight of Polyamide-11" chapter in *Am. Chem. Soc. Symp. Ser.* No. 881, 2004.

A. Meyer (M.A. '99), N. Jones (B.S. '00), S. Lyle (B.S. '03), S.Venkataramani, J. Clark, D. Kranbuehl, "Laser Light-scattering Molecular Weight Anaylsis of a Poly(fluoroacrylate)" *J. Appl. Polym. Sci.* **2004**, *91*(6) 3447-3454 .

Z. Guo (M.A. '02), J. Warner (B.S. '98, M.S. '01), P. Christy (B.S. '05), D.E. Kranbuehl, G. Boiteux, G. Seytre, "Ion MobilityTime-of-flight Measurements: Isolating the Mobility of Charge Carriers during an Epoxy-amine Reaction" *Polymer* **2004**, *45* (26) , 8825-8835.

D. Krouse (B.S. '04), Z. Guo (M.A. '02), D. Kranbuehl, "Isolating the Mobility and Characterizing the Effect of Crosslink Structure versus the Monomer State Using Ion Time of Flight" *J. Non Crystallline Solids* (submitted).

2005 Chemistry Concentrators and Their Destinations

Amanda Rush Boone	work for a year before graduate school
Patrick Bryan Butler	(Dec. '04) seeking employment
[M] Diana Marie Cabral	graduate studies in chemistry, U Penn
[H] Emily Rebecca Carper	medical school, EVMS or MCV
[H] Daniel Gregory Chan	graduate studies in chemistry, UCLA
Peter Charles Christy	fleeing to Ireland
[M] Rebecca C. Coggin	chemical analyst, Telemos Solutions, Inc. while studying biodefense at GMU
[M] [H] Sara E. Costa	graduate studies in chemistry, Dartmouth
[M] Phillip Tyler Cunningham	Infantry Platoon Leader, United States Army (bio/chem)
[ϕ] [D] [M] [H] Megan E. Dellinger	graduate studies in chemistry, MIT
[H] Jennifer Joan Dertinger	graduate studies in chemistry, Washington University in St. Louis (chem/music)
Heather Nicole Gaburo	graduate studies in forensic science, GWU
[ϕ] Carl Brett Giller	graduate studies in materials science, U Delaware
[ϕ] Sara Loren Gonias	Laboratory and Research Specialist, UVA
Emily Hoover-Hamlin Gorman	taking a year off before med school in '06 (chem/psyc)
[H] Ethan Joseph Greenblatt	graduate studies in chemistry, Stanford
Karen Anne Hahn	young adult campus minister for St. Bede Catholic Church, Williamsburg
[M] Matthew David Hassink	not reported
[H] Courtney James Hastings	graduate studies in chemistry, UC Berkeley (chem/music)
[M] Kristin Danelle Hehe	Search Manager for Landon-IP, a patent search firm
Liam Joseph Heincer	undecided (chem/math)
Jacob Daniel Hosen	study Spanish in Latin America (chem/bio)
Melissa Erin Howard	chemist, Merck Pharmaceutical's Process Research Division in Rahway, NJ
[M] Michael Paul Hurt	master's program in chemistry, W&M
[M] [H] Hillary Anne Huttenhower	graduate studies in chemistry, Georgia Tech
Chihiro Ito	graduate studies, Sargent College of Health and Rehabilitative Science, Boston U
[M] Angela Marie Jung	medical school, EVMS
Mary Gratia Kim	(Dec. '04) not reported
[M] Bryan Thomas Lobar	work as a volunteer in the Peace Corps (chem/intr)
Tony Ly	graduate studies in chemistry, UC Riverside
James Richard Manning	undecided (chem/intr)
Derrick Anthony Manzlak	master's program in chemistry, W&M (psyc/chem)
[ϕ] Mamio Christa Mattern	medicinal chemist, Merck Pharmaceutical
Adriane Kameo Miller	completing a minor in math and graduating in Dec. '05
Kimberly Elizabeth Miller	not reported (chem/psyc)
Timothy Robert Montgomery	MPL internship, Scripps Institute of Oceanography
Omer Farooque Munshi	medical school, St. George's University
[ϕ] [M] Lynda Mytram Nguyen	graduate studies in pharmacy, UC San Francisco
Joshua James Nicklay	graduate studies in chemistry and biochemistry, UVA
[ϕ] Stephanie Lorraine Oakes	master's program in dance, Tisch School of the Arts (chem/kine)
Timothy Bruce Oliver	(Aug. '05)
[H] Palak Oza	undecided (chem/rlst)
[M] Elisa Lorraine Padilla	medical school, UVA
Allison Marie Pfaff	undecided
[M] Zachary David Reed	graduate studies in chemistry, U Georgia
David Andrew Reese	dental school, U Maryland
[M] Sarah Howard Robinson	chemistry teacher, Teach for America in Baltimore
Stephanie Jean Rochford	(Dec. '04) internship, The Evironmental and Energy Study Institute (chem/soc)
[M] Michelle Leigh Rodrigue	graduate studies in biodefense, GMU
[H] Jennifer Ann Roskowski	graduate studies in geology, U Arizona
Eric Ahlers Schluederberg	undecided
[M] [H] Meghan Eileen Schulz	undecided (chem/govt)
Armen Youri Sharabian	(Dec. '04) not reported
Diego A. Vicente	medical school, Georgetown
[M] Anthony Robert Vortherms	graduate studies in chemistry, Syracuse
Erica Suzanna Vos	undecided
[D] [M] [H] Emily Doris Wischow	graduate studies in chemistry, Purdue

[ϕ] PBK **[D] Dow Scholar** **[M] Monroe Scholar** **[H] Honors in Chemistry**

Departmental Awards

William George Guy Prize in Chemistry	**Megan Dellinger**
Virginia ACS Award	**Courtney Hastings**
American Institute of Chemists Award	**Mamio Mattern**
Alfred Armstrong Teaching Assistant Award	**Adriane Miller, Emily Wischow**
Hypercube Award	**Karl Giller**
Merck Index Award	**Rebecca Coggin, Sara Costa, Lynda Nuguyen**
Alumni Undergraduate Research Award	**Sara Gonias**
Blanton Mercer Brunner Scholarship	**Mamio Mattern**

News about Students

Keep Your Eye on Megan Dellinger!

When she entered William and Mary in 2001, Megan Dellinger ('05) showed a lot of promise. She was awarded one of two Dow scholarships given to college freshmen who are prospective chemistry majors, and she had already participated in chemistry research during the summer at Carnegie Mellon University.

After her freshman year, Megan began to work with inorganic chemist Bob Pike, who assigned her to a project related to the development of hybrid catalysts, one that could prove useful to chemists instigating organic reactions. "Given the amount of work remaining when Megan took over the project, I anticipated that the project would take her the entire summer to complete", Bob wrote in a recommendation for her. "How little did I know Megan. She ran two, three, even four reactions simultaneously, completing the work halfway through the summer."

And she has made an impact studying inorganic and organometallic chemistry. Her research focused on using caged phosphite ligands to make metal-organic networks. That involves taking copper atoms and connecting them to molecules to form insoluble networks. Chemists are interested in these networks for their use as heterogeneous catalysts, which are cheaper and easier to remove from solutions than are homogeneous catalysts. Using different ligands alters the pore structure of a network, which could enable chemists to tailor their catalysts to achieve the specific reactions they are looking for during experiments.

Megan has collected virtually every award and honor given through William and Mary's chemistry department. As a sophomore, Megan was named a Beckman Scholar, and in her junior year, she was chosen to receive the Iota Sigma Pi National Honor Society for Women in Chemistry Undergraduate Award in a national competition. On Charter Day, she added one more distinction to the list—the 2005 Thomas Jefferson Prize in Natural Philosophy.

Megan begins graduate studies in chemistry at MIT this fall. "I really would like to be a professor", she says, and has worked as a teaching assistant in the chemistry department since her sophomore year. "Ideally, I would like to work somewhere like William and Mary because I really like how it focuses on the undergraduates and how the professors are actively involved in research with the students."

Diego takes a young patient's blood pressure.

Diego Vicente organizes volunteer trip to the Dominican Republic

For two weeks in early January, chemistry concentrator Diego Vicente ('05), joined by four classmates and a doctor who is a William and Mary alumnus, treated sick and neglected people in two poverty-stricken villages in the Dominican Republic.

The students began to plan for their trip in the fall of 2004, and contacted local churches, state legislators, organizations—anyone who might donate to their effort. They sold raffle tickets and held other fund-raisers, such as a haunted house and a relaxation clinic. In all, the group raised more than $4,200 for the trip.

The team set up two clinics in the Domincan Republic; the first in a very rural area called Jarabacoa, the second in the town of Bonao. Many of the medicines brought on the trip were over-the-counter items such as antacids, vitamins, painkillers and anti-infective ointments, which team members purchased before leaving the United States. Although such items are found in a typical American medicine cabinet, they are not regularly available to residents in the Dominican Republic.

"The accomplishment of setting up a medical clinic in a country we never had even visited before was an incredible experience", Diego said. "It helped me realize what service to other people means and how you can make a difference in someone's life as a health care provider."

Diego enters medical school at Georgetown this fall.

The William and Mary team poses with some of the friends they made during their visit. From left: Kay Sprinkle ('05), Luke Neilans ('05), Diego Vicente ('05), Dr. Mark Ryan ('96), Jason Starr ('06), and Matt Harrington ('05).

News of Our Alums

It is wonderful to hear from you! We encourage you to keep us up to date with what is going on in your lives. Information about how to contact the Department is on the back page of this newsletter (or contact your favorite professor, who can forward the message).

Krish Bakhshi ('99) and **Ryan Quarberg** ('99) were married on June 4 in Maryland. Krish is a member of a veterinary practice in Baltimore, and Ryan is a quality control chemist at Cytec, in Havre de Grace, MD.

Patty Pound Berry ('63) returned to her alma mater as one of the panelists at a healthcare conference, "Medical Care for Older Americans: New Public Policy Dilemmas", held on campus last year. Patty, a geriatrician and executive director of the Merck Institute of Aging and Health, discussed the challenges faced by physicians who treat America's seniors on the front lines. Other panelists included the commissioner of the Virginia Department for the Aging and the dean of policy studies at Georgetown's Public Policy Institute.

Bob Belshe ('70) is director of the center for vaccine development at Saint Louis University and the leader of one of two studies which sought to determine the efficacy of injecting flu vaccines under the skin in smaller doses rather than as intramuscular shots. Bob believes that in an era of increasing need for influenza vaccine, this technique could prove useful in stretching the supply. The results of the studies were published in The New England Journal of Medicine in November 2004.

In a note from **Emily Buehler** ('96), we learned that since graduating from UNC, she has been living in the Chapel Hill area and working as a bread baker. Two years ago she went on a long-awaited bike trip across the country, and following that experience, began considering a career as a writer. Emily is currently pursuing this option, and her first big project is a book on the art and chemistry of breadmaking.

David Butler ('85) is a radiation oncologist in St. Louis, MO.

Tom Chen ('03) begins teaching general and AP chemistry this fall at St. David's School in Raleigh, NC.

We were saddened to hear that **Jason Choy** ('98) passed away in a traffic accident in Berkeley, CA this past July. Jason received his Ph.D. posthumously on Aug. 20 from the University of California, Berkeley. A lecture series on single molecule manipulation at Berkeley will be dedicated to Jason.

Dale Harris Cohen ('63) and her husband Dick live in Martinsville, NJ, where she is President of Dee Cee Information Services, and he practices law. Their flexible work schedules allow them to indulge in their love of travel (and to enjoy their grandchildren).

Jenine Cole ('02) and **Jonathan Maeyer** ('99, MA '01) are to be married on October 15. Both are enrolled in the Ph.D. program in chemistry at the University of Arizona.

Paul Dainer ('69) teaches oncology at the University of Georgia.

Kady Dendramis ('03) completed her Master's in Chemistry at Ohio U. and has enrolled in a Ph.D. program in materials science at the U of Washington under Eric Chu. She started her research this summer, and is loving it!

Jo-Anne Prince Ehrenfried ('48) and her husband Al live in Acton, MA, where she has led a busy life as wife, mother, and founder and manager of a television program serving Concord. Recently she has added photography to her interests, and her husband says, "She has blossomed, just like the flowers".

Peter Graham ('00) completed his Ph.D. in chemistry at UVA and has started a post-doctoral appointment at the

University of British Columbia. Peter and Emily Browning ('00) were married in August 2001.

In May, **Steve Hodges** ('82, MA '86) received a master of divinity degree from Union Theological Seminary and Presbyterian School of Christian Education, where he was a recipient of the James and Elizabeth Appleby Book Award.

Derek Jackson ('94, MA '97) and **Allison Choy** ('94) report the birth of their son Fletcher in September 2004.

Two alums from the class of '66 are administrators in Chincoteague, VA—**J.W. Jeffries** is the director of public works, and **Earl David Ross** is a councilman.

Jason Jones ('98) received his Ph.D. in organic/polymer chemistry at VPI in April 2004, a month after he and Amanda Harris, whom he met in grad school at Tech, were married. They live in Wilmington, Delaware, where Jason is a research chemist for DuPont.

Pat Kaczaral ('81) received his Ph.D at Purdue in 1986 and is currently the director of analytical development at Solvay Pharmaceuticals in Marietta, GA. Pat and his wife Susan James live in Woodstock, GA, and have two children—Jacqueline, a junior majoring in biology and psycology at Colorado State, and Samantha, a second-grader.

Jonathan Kent ('89) is a senior process development scientist in the biological products division of Bayer Healthcare, specializing in protein purification technologies. Jonathan, his wife Linda, and their children Katie, Nathan and Noah live in Holly Springs, NC.

Brian Lottig ('98) earned his master's in brewing and distilling from Heriot-Wade University in Edinburgh, and in 2000 went to work for Great Lakes Brewing Company, a microbrewery in Cleveland with an excellent international reputation, where he is now brewmaster. Not resting on his laurels, Brian is back in school, studying for his master's in industrial engineering at Cleveland State. You can read more about Brian in the Spring/Summer 2005 issue of the William & Mary Alumni Magazine.

Judy Moy ('99) is finishing her fourth year at Tufts Dental School in Boston, and will be applying to graduate residency programs.

Monique Nchotu ('04) is attending Lake Erie College of Osteopathic Medicine in Florida.

Jeff Nickel ('65) and his family have lived in California for about 20 years, and he is now vice president of business development for a small public biotech company in Berkeley. Jeff keeps in touch with the College through alumni groups active in the San Francisco area.

Steve Nichols ('79, M.D. UVA) is a psychiatrist at Western State Hospital in Staunton, VA. Steve, his wife Melanie and their 11 year old son Keith live in Charlottesville.

After living and working in Thailand for three years, **Suzy Argentine Olds** ('90) and her husband Doug moved to Chicago, and she has now been assistant chair in the biomedical engineering department at Northwestern for five years. She teaches thermodynamics, and has developed a curriculum challenging middle school students to design and build an artifical limb.

John Lenwood Owen ('40) taught high school before joining the U.S. Army Communications Department, and retired as a Program Analyst. He and his wife Alice live in Manasquan, NJ, and celebrated their 62nd wedding anniversary last October.

Chang Park ('04) begins his studies in dentistry at Temple University this fall.

Nicole Bonnaffon Piguet ('97) graduated from EVMS in May 2004, receiving the James E. Etheridge Jr. and Ahmed A. Shoaibi Scholarship in recognition of her exceptional concern for the needs of children and intention to practice pediatrics. Nicole is doing her internship and residency at Yale New Haven Children's Hospital.

Christine Cook Podracky ('92) and her husband Mark have their own computer consulting business and share their Fairfax Station, VA, home with an assortment of critter companions—"four dogs, seven cats, assorted turtles, fish and other amphibious creatures".

David Pond ('64, Ph.D. University of South Carolina) recently retired as Vice President of Research and Development after a 35-year career at Eastman Kodak and Eastman Chemical. He is now Managing Director of the Nanocenter at the University of South Carolina. He and his wife Susan have been married for 37 years and have three children. Alycen is Assistant Professor of Biochemistry at Western Connecticut University, Anne ('97) is an attorney with a law firm in Kansas City, MO, and David is midway through a residency in periodontics at Tennessee in Memphis.

In 2003 **Sarah Prunier** ('01) moved to California (it helped that her boyfriend David Law was entering the graduate program in astronomy at CalTech), and began work on certification to become a Montessori teacher, something she has found she really enjoys. She starts this fall as lead teacher in the elementary classroom of Oak Knoll Montessori School in Pasadena, and has been accepted to Loyola's master's program in Montessori Education, a 4-summer course. Sarah and David became engaged in March, and have set a December date for their wedding.

Sad news about the loss of their father (see *Final fractions*) also gave us an opportunity to learn what the **Quaglianos** are doing. **John** ('85, Ph.D. UVA) is vice-president for research at Qbit, a company in Maryland doing special computer programming. **Peter** ('86, M.D. MCV/VCU) is a radiologist at McGuire VA Hospital in Richmond. **Mary Quagliano Blunt** ('93 English, L.D. UVA) is an attorney in Charleston, SC .

Pat Raymond ('82, MCV '86) has opened her own gastroenterology practice (after 13 years of group practice) in Chesapeake, VA. She is a contributor to the latest in the Chicken Soup books: *Chicken Soup for the Caregiver: Stories to Inspire Caregivers in the Home, the Community, and the World*, and now hosts a regional NPR radio show, "House Calls".

Don Ream ('44), a retired Head Engineer for the U.S. Navy, lives in Tempe, AZ.

Steffi Rochford ('04) graduated last December and in January began interning at The Environmental and Energy Study Institute in Washington. Her main area of focus is on alternative sources of energy, and her work includes research on transportation issues, the use of biofuels and ultra low sulfur diesel, and biobased products. Her internship has made Steffi certain that this is the area she wants to be in, and she is now searching for full time jobs at other environmental organizations, law firms and consulting groups.

Peggy Schott ('77) is in in her second year of teaching chemistry to nonmajors at Dominican University in Chicago and finding it very satisfying. Peggy is still with the Dominican sisters but has not yet taken final vows. She writes, "We're in old facilities (like old Rogers was) but should have a new science/ academic building in the fall of 2007".

Phil Smith ('90, MA '91) is a pharmaceutical product manager at Ft. Detrick, MD in the US Army Medical Materiel Development Activity, working in drug development and learning more about the clinical phases and regulatory aspects of bringing a new drug to market. **Kirstin (Adams) Smith** ('94) works in the Department of Pharmacology in the Division of Experimental Therapeutics doing drug metabolism and analysis in support of pharmacokinetic and other animal studies. Both sound very busy!

An e-mail from the Smiths last fall sent us news about some other Chem graduates, too. **Angela (Aquino) Koelsch** ('88) is a Lieutenant Colonel and Chief of the Core Lab at Walter Reed. She and her husband Bernie have two daughters, Josephine and Sophia, and live not far from the Smiths. **Pete** ('90) and Becky **Cocolis** live in Burke, VA, where he has opened his own dental practice with Becky as his office manager. They have two children, PK and Rachael. Phil and Kirsten attended graduate school at UVA with a number of W&M grads, including **Albert Cheng** ('98), who transferred from the graduate program at UVA to Georgetown after his second year (and a successful candidacy defense).

We spotted a familiar name in the Washington Post recently. **Dave Soles** ('96) teaches chemistry at H-B Woodlawn Secondary School in Arlington, VA, and the school was the subject of a Metro article in June. H-B Woodlawn, founded in 1971, is an unorthodox school offering a creative approach to learning which gives students greater input and responsibility. That approach must work, because the school regularly appears near the top of Newsweek's "America's Best High Schools". Dave, himself a 1992 alumnus of Woodlawn, is described in the article as having "a moppy Mohawk and long sideburns" —sounds like the Dave Soles we knew!

Brian Walker ('96) stopped by this summer to do some research in our library. He ia finishing off his Ph.D. at VCU under Todd Houston, and is currently a research associate at Hampton University's School of Pharmacy, where his research director is Sushma Ramsinghani. Brian and Jennifer Becker (B.A. '98, M.A.Ed. '00) were married in June of 1999.

—— ❧ ——

Units of measurement humor from C&E News, 9/9/02

ratio of an igloo's circumference to its diameter: **Eskimo pi**
2,000 lb of Chinese soup: **won ton**
half of a large intestine: **1 semicolon**
1,000 aches: **1 kilohertz**
2,000 mockingbirds: **2 kilomockingbirds**
basic unit of laryngitis: **1 hoarsepower**
453.6 graham crackers: **1 pound cake**
8 nickels: **2 paradigms**
100 rations: **1 C-ration**

More puns from the same issue…

If lawyers can be disbarred and clergy can be defrocked, doesn't it follow that
electricians can be **delighted**?
musicians **denoted**?
cowboys **deranged**?
models **deposed**?
dry cleaners **decreased, depleated and depressed**?
Supreme Court justices **disappointed**?
baseball players **debased**?
songwriters **decomposed**?
teachers **detested**?

Chemistry Memories

Alums' responses to last year's Newsletter…

from Ralph B. Winston, Class of 1945:

I appreciate hearing about the Chemistry Dept. I have many fond memories of Dr. Guy and being a Chem Lab assistant. He taught me many things and they have served me well thru the years. I am now 80 and still practice medicine (Class of 1947 MCV Richmond). I am Medical Director of a 200 bed nursing home nearby. It keeps me mentally alert and physically active and (hopefully) is delaying the onset of dementia. Good luck to all—keep turning out good chemists—my chemistry background has helped me in many ways thru the years.

A few years ago, we found Dr. Guy's cup.

P.S. When I'm at the Nursing Facility I carefully note where the nearest exit is in case some well meaning aide comes up and takes me by the arm saying "OK, Ralph, it's time to get you ready for bed"!

Ralph Winston, MD

from Karl A. Schellenberg, Class of 1953:

I always look forward to receiving the Chemistry Distillations Newsletter every year, as it brings back fond memories of those who influenced me early on. Without exception, my teachers in chemistry were absolutely tops, and I am glad to know that the William and Mary faculty, staff, and students continue in their tradition of excellence.

My odyssey began with Mr. Thomas Christie, (W&M *ca.* 1930), the chemistry teacher at Washington-Lee High School in Arlington. He influenced us by his example, and was a kind and thoughtful teacher. Every year he drove a small group of students to Williamsburg to take the W&M scholarship tests in chemistry, biology, and physics, that I believe were sponsored by the tri-delta sorority. Anyway, his guidance led to my attending William and Mary beginning the fall of 1949, where Dr. William Guy taught a thorough course that laid before us the vast horizon of the possibilities of chemistry. He was always approachable, one time going step by step through a complicated oxidation-reduction reaction until I understood it. He provided jobs to some students as lab assistants where we got to know the very competant Mr. Edward Katz, who offered informal but valuable instruction in the practical aspects of chemistry. In 4th year physical chemistry, Dr. Guy proved to be very generous, particularly with our grades. In the 2nd year Dr. Alfred Armstrong instilled in us the importance of striving for precision in all of our analyses, and again by his example and patient tutelage, gave us the tools that proved invaluable in all subsequent research. In 3rd year organic chemistry Mr. Gordon taught with enthusiasm and opened our eyes to the limitless possibilities of novel compounds. The organic labs involved real chemical reactions with elaborate apparatus, the safe use of Bunsen burners, and the need for clean glassware for Grignard reactions. They showed us what real chemistry was all about. We were introduced to more advanced areas by Mr. Sands, who was very outgoing and interested in each student. He held afternoon tea at 4 pm, where we drank from 250 ml beakers and held wide-ranging discussions. My biggest regret is that I did not enroll in Dr. Armstrong's organic analytical course. The absolutely superb faculty at William and Mary at that time provided a priceless education not only in the intricacies of chemistry, but in optimistic, honest, enthusiastic outlook on life. By the way, although I have been retired since 1997, I am still synthesizing new compounds (chelate derivatives linked to polyethylene glycol) as possible drugs, along with some younger collaborators.

Karl A. Schellenberg
Professor Emeritus, Department of Physiological Sciences
Eastern Virginia Medical School

Photo courtesy of Ed Katz.

Above is a photo of the Chemistry Department taken in 1952 for the Colonial Echo. From left to right are Ken Gordon, organic, 1946–1953; John Hocutt, organic, 1946–1952 (W&M 1935); Alfred Armstrong, analytical, 1933–1995, (W&M 1932); William Guy, physical, 1925-1968, Department Head, 1946–1968; George Sands, physical, 1948–1956 (W&M 1939); and Edward Katz, instructor, 1947–1980 (W&M 1936).

2004 Chemistry Reception

LAST FALL WE WERE DELIGHTED TO SEE Bettijoyce Breen Lide ('69) and her husband David, Dave Oelberg ('74) and his wife Deb, Beth Schraeder ('74), Ken Updike ('76) and his wife Gale, Eugene Aquino ('88) and his sister Eileen ('87), and Alex Williamson ('89). There was a good turnout from the Class of '94: Robyn Roarke Manke and her six-month-old daughter; Susan Ritenour Barker, with her husband Scott and their 2-year old daughter; Vike and Wendy Sauer Vicente with their baby; and Meredith Brendley Nathaniel, her husband Bret and their daughter. Jenine Cole ('02) and Janine Ladislaw and Tom Chen (both '03) were there, as were Bryn Reinecke, KT Moynihan, and Kelly Kennett (all '04).

Gary Rice takes a breather with Sara Gonias and Ethan Greenblatt (both '05), who helped set up the reception.

Bob Pike chats with Jenine Cole ('02).

Bettijoyce Breen Lide ('69) and her husband David, right, are involved in a discussion with Gary DeFotis.

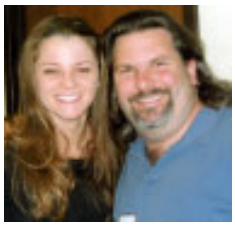
Ken Updike ('76)

Eugene Aquino ('88) and his sister Aileen ('87) with Dick Kiefer.

Robyn Roarke Manke ('94) and her 6-month-old.

Gary Rice and Chris Abelt listen to a conversation.

Kelly Kennett and KT Moynihan (both '04) pose with their research advisor Lisa Landino, right.



Janine Ladislaw ('03) and J.C. Poutsma mug for a picture.

David ('74) and Deb Oelberg

Susan Ritenour Barker ('94), her husband Scott and their 2-year-old daughter.

Tom Chen ('03)

The Vicentes had their own reunion at our reception—Diego ('05), center, joined his brother Vike, sister-in-law Wendy Sauers Vicente (both '94), and their small one.

Bob Orwoll catches up with Beth Schraeder ('74).

Meredith Brendley Nathaniel ('94) and her daughter.

Bryn Reinecke ('04) signs in.

Ed Katz in his stockroom,1956

Between Ed Katz (who celebrated his nintieth birthday this year) and Ted Putnam, Chemistry has been well looked after for more than a half-century!

Ted Putnam at his desk this summer

Counting our blessings…

In 1980, when Ted Putnam arrived to be our Departmental Administrator, his predecessor Ed Katz was retiring after a career of more than thirty years spent in the stewardship of Chemistry resources, instructing legions of students (not to mention faculty and staff), and maintaining our good reputation and credit. The Department had moved into "New Rogers" just a few years earlier. Mr. Katz was a tough act to follow.

Of course, Ted brought his own strengths to the job. A "mountain boy" from the hills of North Carolina, he got his undergraduate degree in chemistry at Maryville College in Tennessee, a master's at Auburn University, and had been a chemist at large at Standard Oil's Lima, Ohio, facility for several years before coming to William and Mary.

In the last twenty-five years, the pace of activity in research, particularly, has increased dramatically, as have the expenditures required to support it and the growing numbers in undergraduate laboratory courses. Ted is very much a "hands-on" person who has his finger on the pulse of all of the building's mechanical systems—he can almost certainly explain to you what caused the power outage in Rogers last night in the middle of your critical NMR run, and he probably had come back in to check on things (not that that makes you feel any better about your lost data). His broad knowledge and good relationship with Facilities Management help to keep our now aging systems well maintained and running as smoothly as possible. And of course, he and his fiscal assistant Linda Savedge handle all the paperwork for administration of departmental and grant funds, student employment, and purchases of chemicals and equipment. A sucessful battle with lung cancer more than a decade ago and more recent surgeries to replace both hips have slowed Ted down only a little—and now he gets to call himself "Titanium Man"!

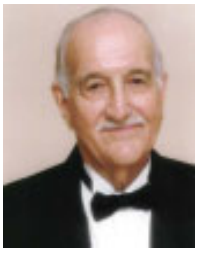
…and noting the loss of three dear friends in the past year.

Betty Chess

Betty Chess, our department secretary from 1973 to 1983, passed away last November at 80. She was only the department's second secretary, replacing Mrs. Humphries on her retirement. Betty took dictation, used an electric typewriter, and reserved Friday afternoons at four for her hair appointment. Without ever appearing to hurry, she never missed a deadline and made no typos. Betty possessed a wonderful sense of humor and a razor-sharp wit, which she employed to good advantage sparring with faculty! Those of us who worked with her have many fond memories of Betty, and we know we have lost a good friend.

Alice Phillips

This July, Alice Phillips, who began her job as Ted Putnam's first administrative assistant in 1982, died at 84. Alice did much more than her half-time position required during the ten years we were fortunate to work with her, and was a kind and generous person who never had a bad word to say about anyone , even when it surely would have been deserved. Alice always gave more than she received, and the department was a grateful beneficiary (just one of many, we suspect).



Jim Quagliano

We just learned of the death in May of Jim Quagliano, 90, a visiting professor in 1980–1981, whom we first met when his wife Lidia Vallarino, now a chemistry professor at Virginia Commonwealth University, was visiting professor here in 1974–1975. The Quaglianos, both inorganic chemists, made many friends here and have remained close to our hearts. Jim held teaching positions at Notre Dame, Florida State, and Auburn, and after his retirement taught freshman chemistry for a number of years at VCU. He and Lidia have three children–John, Peter, and Mary–all of whom, we are proud to say, are William and Mary graduates (see *News from Alums*), and three grandchildren.

Make our Chemistry reception part of your Homecoming 2005!

The Department is having its wine and cheese reception for chemistry graduates in Rogers Hall on Friday, October 21, starting at 5:30 p.m. We look forward to seeing you there. If you can join us, please try to let us know by October 14.

You can e-mail us at pxhilg@wm.edu, give us a call at 757-221-2540, or return this form to:

Patricia Hilger
Chemistry Department,College of William and Mary
P.O. Box 8795
Williamsburg, VA 23187-8795

Yes, I plan to attend the Chemistry reception on Friday, Oct. 21, 2005, at 5:30 pm.

Name _____ Class of _____ ___ No. of guests

Even if you're unable to come, consider using this space to let us know what you're doing and mailing this form to us at the above address. We'd love to hear from you.

The College of WILLIAM & MARY
Department of Chemistry
P.O. Box 8795
Williamsburg, VA 23187-8795

Non-Profit
Organization
U.S. Postage
PAID
Williamsburg
Virginia
Permit No. 26