

# The Carnegie Mellon Chemist

## CHEMISTRY ALUMNI NEWSLETTER



CARNEGIE MELLON UNIVERSITY  
DEPARTMENT OF CHEMISTRY  
January 1997

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### Chemistry Undergrads

**Awards** We are pleased to report that the quality of our chemistry majors was recognized by a number of awards in 1996, including: the President's Scholarship for Law School at the University of Dayton (Michelle Forney), the Society of Analytical Chemistry Pittsburgh Award (David Hackney), the Andrew Carnegie Society Award (David Hackney), a University Leadership Award (Theresa Abernathy), a Senior Leaders Award (Shannon Lemrow), and a Fifth Year Scholarship from Carnegie Mellon (Everett Neal), see further below.

**1996 Graduating Class** Twenty-two students received undergraduate degrees in chemistry in the May 1996 commencement. Two of these completing the requirements for the Departmental Honors Program. Two graduated with University Honors, and six received MCS College Honors. Two were inducted into the Phi Beta Kappa Honor Society and one into Phi Kappa Phi. Eight students entered graduate schools including: Brandeis, Wisconsin, Purdue, Northwestern, and U. Washington.

### Alumnus Research Cited in C&E News

**Lawrence R. Sita**, BS 81, and his research group in the Department of Chemistry of the University of Chicago were featured in the *News of the Week* column in *Chemistry & Engineering News* for their research on carbon dioxide fixation (see the 11 November 1996 issue, p. 8). Larry received a PhD from MIT in 1985, and is now an Assistant Professor at the Univ. Chicago. The work cited was done with a graduate student and a postdoctoral associate. The report cited their demonstration that isocyanates and carbodiimides can be prepared from carbon dioxide and bisamides containing the group 14 metals germanium or tin by a process known as metathetical exchange (reported in *J. Am. Chem. Soc.* (1996) 118:10912). Larry is quoted in the C&EN column: "This represents a simple 'fixation' of CO<sub>2</sub> via a facile metathesis process that occurs rapidly and exothermically at room temperature." He points out that isocyanates and carbodiimides are both classes of compounds used to prepare a number of industrially important chemicals.

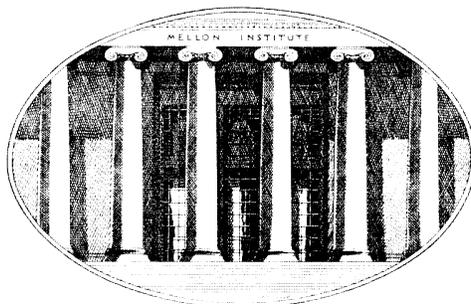
### Alumna Receives National Award

**Stephanie Louise Kwolek**, MM 46, has received the 1996 National Medal of Technology, the nation's highest honor for technological achievement. The award is in recognition of her central role in the invention and development of Kevlar®, an aramid fiber of the E. I. du Pont de Nemours Co. We were fortunate to have Stephanie give a talk to the Women in Science seminar series this year to recount her professional experience. On graduation from Margaret Morrison, she joined the Pioneering Research Laboratory of du Pont. There she became part of an initiative to find new polymers and polymerization methods to obtain materials with higher use temperatures and other desirable properties, subsequently assuming a leadership role in that enterprise. The investigations developed an impressive range of new materials, some of which developed to commercial products: Lycra® spandex fiber, Kapton® polyimide film, and Nomex®. That work also led to the first identification of a liquid crystalline solution of a fully synthetic polymer, and the first

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## The Department Head's Column

On behalf of the Chemistry Faculty, I am again pleased to address the Alumni of our Department, to highlight some of the important developments in the Department since our last Newsletter, and to share our plans for the future.

To summarize faculty affairs, I am pleased to note the promotion of Karen Stump to the rank of Principal Lecturer, the reappointments of Assistant Professors Susan Graul, Michael Hendrich and Linda Peteanu, and the appointment of Colin Horwitz and Mark Bier as Research Faculty. Professor Josef Dadok will retire in July 1997, from long service to the University, having joined Carnegie Mellon in 1967. Professor Jonathan Lindsey accepted a Chaired Professorship at North Carolina State University; we all wish him the best in his new environment. At the same time, our Department continues to renew itself, with searches currently open for a Senior Computational Chemist and two Bioorganic Chemists.

Last year was quite successful for Chemistry, reflected in part by an increase in the available Departmental Research Budget from \$3.9 to \$4.9 million. Our graduate class has grown steadily: 14 new students joined us in 1996, as compared to 11 in 1995 and 9 in 1994. In addition to graduates from American colleges, one student each arrived from Bulgaria, China, India and Switzerland.

We graduated a magnificent class in 1996. Nearly all of the graduates either went on to graduate schools, professional schools or gained industrial positions. We believe that the strong research component in the undergraduate curriculum helps our undergraduates compete in the world outside Carnegie Mellon. In fact, nearly all students in the classes of '94, '95 and '96 were involved in research. That research had the tangible results of 7 papers published in 1994, 8 in 1995 and 7 in 1996. For example, Theresa Abernathy coauthored a paper published last year in "Science".

Instrumentation for our research and education has significantly improved. Proposals submitted by Professors Collins, Hendrich and Peteanu to the Dreyfus Foundation and to Hewlett Packard were funded, resulting in four new UV spectrometers and the second FT-NMR instrument for our undergraduate laboratories. We are all delighted by the establishment of the Center for Molecular Analysis, with Mark Bier as Director, which houses research grade spectrometers (UV/VIS/NIR, FT IR, MALDI TOF MS, LCQ MS, and two 300 MHz NMR instruments). This burst in research instrumentation significantly improves our research capabilities; it will be very important in attracting new faculty, and further strengthening our undergraduate and graduate programs.

We hope and expect to continue the trajectory of 1996 into the new year. I would like to thank you, our faithful Alumni for your interest in the Department and ask you to continue to work with us to improve your Alma Mater by sending your valued suggestions and advice.

Krzysztof Matyjaszewski

### Chemistry Faculty:

G. C. Berry  
T. J. Collins  
J. Dadok  
S. T. Graul  
M. P. Hendrich  
M. Kaplan

P. J. Karol  
H. J. Kim  
M. Llinás  
K. Matyjaszewski  
R. D. McCullough  
E. Münck

G. D. Patterson  
L. A. Peteanu  
S. W. Staley  
R. F. Stewart  
K. H. Stump  
C. H. Van Dyke  
D. Yaron

## Faculty Profiles

Two of our senior faculty are featured in this issue:

### Gary D. Patterson

joined the Department in 1984 as Professor of Chemical Physics and Polymer Science, following a decade in the Chemical Physics Department at the AT&T Bell Laboratories. His graduate work had been with Nobel Laureate Paul J. Flory at Stanford University. His research interests emphasize the structure and dynamics of amorphous materials from gases to glasses, with special emphasis on the behavior of polymeric materials. He uses laser spectroscopy to "listen to molecules sing and watch them do their dance" over a wide frequency range. These experimental results are then used in a systematic, rigorous analysis of theoretical and computer calculations of material behavior. Recently, Gary has been teaching Advanced Physical Chemistry for undergraduate Chemical Engineers and Statistical Chemistry for graduate students. Chemistry majors see him as the advisor to the ACS Student Affiliate Chapter and one of the team of undergraduate class advisors--and as "the other Professor who comes to undergraduate seminars!Ó.

### Stuart W. Staley

joined the Department in 1986 as Professor of Chemistry, coming from prior positions at the Universities of Nebraska and Maryland. His research encompasses several areas of physical organic chemistry: studies of electron transfer by dynamic NMR spectroscopy, the preparation and characterization of Mobius aromatic molecules, the synthesis and isolation of theoretically interesting highly reactive molecules. In each area, Stuart combines the synthesis of molecules expected to exhibit unusual properties with structural and dynamic characterization of their molecular behavior, and applications of molecular orbital theory to model the behavior. A recent example involves the dynamics of bond switching and electron transfer in the dianions of two cyclooctatetraene rings bridged by various

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## Chemistry Undergrads

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Four students will attend medical school, one student will attend law school, and nine have accepted positions in the private sector.

In addition to research projects at Carnegie Mellon, summer appointments were held by students at Park-Davis, Georgia Tech, U. Tenn, Columbia, UCLA, Bayer (Germany) Los Alamos, Univ. of New Mexico, Albert Einstein School of Medicine, and Dow Chemical.

**ACS Student Affiliates** The past year was a busy one for our student affiliate chapter. The weekly newsletter (*The Pyridine*) was resurrected by Jason Ekberg. The social life of the students was enriched by fireside parties at the homes of Professors Staley, Caretto and Yaron. The Senior Banquet was held in the Mellon Institute and honored Professors Caretto and Cassasa on their retirement. A demonstration project during National Chemistry Week was carried out in the new Student Center in cooperation with many local ACS affiliate chapters.

**Curriculum Matters** New instrumentation obtained and/or funded through a variety of internal and external sources, such as the Dreyfus Foundation and Hewlett Packard Corporation, have made possible an extensive modernization of the Tech IV laboratory. This funding has been used to upgrade one existing 60 MHz NMR spectrometer, giving it Fourier transform capabilities, and to purchase of one research-grade EPR spectrometer and one Raman spectrometer. A second NMR spectrometer was similarly upgraded with funds from the MCS Dean's Office. The grant from Hewlett Packard was in the form of four state-of-the-art diode array spectrometers with accompanying PC's. An additional PC was purchased with funds granted through the Hughes Foundation. Most of this instrumentation is shared among the organic and

physical teaching laboratories. The new experiments made possible by these acquisitions include laser Raman and resonance Raman spectroscopy of liquids and biological chromophores and ESR spectroscopy of nitroxide radicals. The PC's are being used to run the commercially available package Hyperchem allowing the students to model their experimental results using AM1, MNDO, ZINDO and other semiempirical methods.

The Environmental Institute at Carnegie Mellon affords Chemistry undergraduates the opportunity to take environmental courses as electives offered by various departments and participate in chemistry or interdisciplinary undergraduate environmental research projects. A complete course listing is available at the Institute's URL site: (<http://www.envinst.cmu.edu>). One of these is the course in Green Chemistry offered by Professor Terry Collins in our Chemistry Department for the past few years.

**Student Advising** The system for advising Chemistry majors was revised several years ago to facilitate improved contact between students and mentors. First-year students in MCS are advised by Eric W. Grotzinger, Associate Dean for Undergraduate Affairs of MCS. Robert P. Kail, Associate Dean of CIT, who had performed this function for many years, now carries out similar duties in the engineering college. Professor C. H. Van Dyke provides oversight on the progress of all Chemistry majors with respect to course requirements, as he has for several years, but the system now provides a Class Advisor for each of the second through fourth years, in place of the prior method of assigning each student an individual faculty advisor. Of course, students still come in contact with individual faculty, especially through the research projects which most students undertake, see below. Second-year Chemistry majors are advised by Karen Stump, who gets them off to a good start. Karen and Chuck Van Dyke also handle the weekly Chemistry Undergraduate

Seminar, required of all Chemistry majors. A faculty member is assigned to the third-year majors, and follows them through their fourth year. Currently, this responsibility is rotated among G. D. Patterson, S. W. Staley and D. Yaron. These advisors help students understand the pros and cons of possible career direction, including advanced studies, immediate entry to the workforce, or other possibilities. For example, students are advised on the timing and nature of Graduate Record Exams, and the best way to present themselves to prospective employers, graduate schools, etc.

## Undergraduate Research

Most of the Chemistry undergraduates are involved in a research project during the third or fourth years, and some start even earlier. One result of this is an increasing number of student coauthorship of published research papers. As of this count, some 60 different students have been coauthors since 1990. A list of these publications may be found on the Department's Home Page (see below for the URL).



## Chemistry Newsletter on the Web

This issue of the *Chemistry Newsletter* may be found on the Home Page for the Department of Chemistry at the URL:

<http://www.chem.cmu.edu>

At present, the Home Page includes

- Graduate Studies
- Undergraduate Studies
- Faculty Research Interests

along with other items for local use. Take a look, and send us your suggestions to make it more useful to you and others. We will be expanding the Home Page to include links to other resources as well as more information on departmental activities.

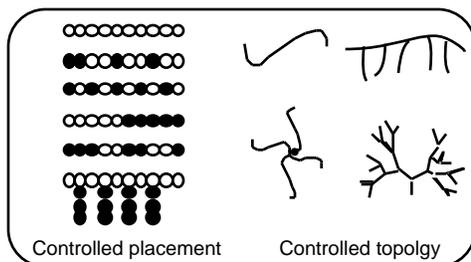


## Chemistry Fifth Year Scholarship Program

As noted above, Everett Neal, a Chemistry undergraduate, received a Fifth Year Scholarship from Carnegie Mellon for 1997-98. The scholarship program, begun in 1991, provides tuition and a \$6,000 fellowship to support distinguished students in a fifth year of study to pursue a broadened educational program, often in an entirely different area than their major field of study. Everett, who is working toward degrees in Chemistry and Industrial Management, would like to highlight the similarities and differences between the sciences and arts through a series of on-campus lectures during his fifth year. He is a member of the Kiltie Band, a resident assistant, and participates in intramural sports. He is a coauthor of two published scientific papers resulting from research at Los Alamos National Laboratory and Carnegie Mellon.

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**Krzysztof Matyjaszewski** has started an Industrial Consortium on Atom Transfer Radical Polymerization (ATRP), sponsored by 11 companies: AKZO, Asahi, Bayer, BF Goodrich, DSM, Elf, Geon, JSR, Kaneka, PPG, Rohm & Haas. The mission is to define the scope and limits of ATRP, along with possible applications. ATRP is developing as a robust technique for controlled/"living" radical polymerization, affording many features of the control of monomer sequence and chain topology associated with anionic polymerizations.



The key is a rapid dynamic equilibrium between minute amounts of active radicals, which may add monomer, and dormant chains, comprising the bulk of the chains, thereby suppressing chain termination, and affording control over monomer sequence, chain topology, and chain length, similar to that in anionic polymerizations. Controlled monomer placement permits preparation of homopolymers, as well as copolymers with random, alternating, block, gradient, or graft sequences (top to bottom in figure). Controlled topology permits preparation of linear, comb or star branched and hyperbranched polymers (see figure). ATRP has been used with styrenes, dienes, (meth)acrylates and acrylonitrile to prepare polymers with predetermined molecular weights ( $M_n > 10^5$ ) and low dispersities ( $M_w/M_n < 1.05$ ). See Kris's entry in the Department's Home Page for a bibliography.

## Kwolek (from p. 1)

successful exploitation of the properties of such solutions to develop the commercial product, now known as Kevlar®. Over 200 applications for Kevlar® include light-weight personal armor, nearly neutrally buoyant cables to anchor deep sea rigs operating at depths where other materials fail of their own weight, and a light-weight filler in composites for the transportation industry.

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## Faculty Affairs

**Chemistry Research Retreat** number 6 was held in a new venue for the annual event: the Hidden Valley Resort in the Laurel Highlands. The prior retreats were at the more spartan (but scenic) YMCA camp, also in the Highlands. The retreat, organized each autumn (as the leaves develop their fall colors) by **Eckard Münck**, affords faculty, graduate students

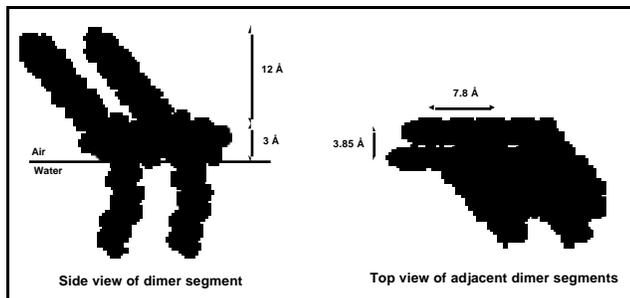
and research associates of the Department the opportunity to meet from Friday evening through Sunday noon for seminars and informal discussion and relaxation. The research presentations are distributed among the members of the Department's research groups. The program allows plenty of time for discussion, both during the sessions, as well as during the 'free-time'. The funding for this activity comes in part from gifts from alumni and friends.

**Jonathan S. Lindsey** has left us to become Glaxo Distinguished University Professor of Chemistry in the Department of Chemistry of North Carolina State University. We wish him well in his new position.

**James W. Whittaker** has left the Department to join the Oregon Graduate Institute of Science and Technology, Portland, OR, where he will pursue his biochemical research interests.

**Mark E. Bier** joined the Department in August 1996 as Director of the new *Center for Molecular Analysis (CMA)*. The CMA features modern high-performance analytical instruments for use by the Departments of Chemistry and Biological Sciences, and other centers and departments of CMU. Mark had been a Scientist at Finnigan Corp. in San Jose, CA, following Ph.D. studies at Purdue Univ. His research interests include instrumentation development for mass spectrometry, ionization techniques, surface induced dissociation, and membrane inlets. The CMA contains FTIR/NIR, UV/VIS/NIR spectrometers, and two 300 MHz NMRs. Two research grade mass spectrometers will be added in 1997, to provide molecular weight and sequence information for nonvolatile organics, including small synthetic and natural macromolecules, at the femtomole level. Mark was part of a design team that developed one of these instruments while he was with Finnigan. Details on these instruments and the services offered by the CMA will soon be available on the WEB through the Department's Home Page.

**Richard D. McCullough's** research group has been successful in structurally organizing electrically conductive polymers by self-assembly into monolayer or bilayer bundles of highly conductive nanosheets in recent work. New amphiphilic, regioregular alternating copolymers of



polythiophene have been synthesized and are assembled at an air-water interface and transferred to a hydrophilic substrate surface to make monolayer or bilayer films. The predicted structure of the nanosheet has been characterized on the water surface by X-ray synchrotron experiments. New applications of these materials may be conducting polymer switchable biomembranes and sensors and ordered nanoarrays of conjugated polymers at metal or semiconductor surfaces nanoelectronic applications.

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### Faculty Profile (Continued from p. 2)

saturated or unsaturated groups is studied by C-13 NMR spectroscopy to determine mechanisms of charge transfer and the relative conductivities of the bridging groups, with *ab initio* molecular orbital calculations to complement these experiments. Stuart is active in teaching in the undergraduate curriculum, including the courses and laboratories in organic chemistry, and a course he introduced in scientific writing.

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**Josef Dadok** will retire as Professor Emeritus at the end of the '96-'97 academic year, after long service to the University, having joined Carnegie Mellon in 1967. Joe is well known for his research in instrumentation in NMR spectroscopy. His work in NMR instrumentation in Czechoslovakia in 1957-67 led to the first commercial NMR in Eastern Europe. His long-time collaboration with Professor Emeritus Aksel A. Bothner-By included the design, construction and use of advanced high-field spectrometers, producing the first instruments at field strengths of 5.9 and later 14.1 Tesla ( $^1\text{H}$  resonances of 250 and 600 MHz, respectively). These spectrometers were the focus of the NIH National NMR Facility for Biomedical Studies at Carnegie Mellon for more than two decades, attracting scientists from around the world. A history of these developments authored by Joe may be found in the Vol. 1 of the *Encyclopedia of Nuclear Magnetic Resonance*, 1996 (John Wiley).

## ALUMNI NEWS

Your generous responses to the questionnaire in the *Newsletter* and requests for continued issues are much appreciated--we now have heard from 222 of you (many more than once as you update us on your whereabouts and career)!

**John N. Welsh**, BS 25, writes that he is retired but still very active in applied chemistry, a.k.a. cooking!

**Elizabeth P. Hartner** (née Pearsall), BS 31, MS 37, who is retired from the Univ. Pittsburgh, was a member of the CMU Reunion Committee in the fall of 1996. She authored "Introduction to Automated Literature Searching," which was published in 1981.

**Elizabeth K. Winters** (née Kenney), BS 36, son, George Winters, Col. USAF ret. is a member of technical staff of Carnegie Mellon's Software Engineering Institute.

**Stuart G. Ballin**, BS 38, is retired from the Chief Medical Examiner's Office of New York City; he earned MS (41, Polytechnic Univ.) and PhD (49, Univ. of Texas) degrees after leaving CMU.

**John J. McGovern**, BS 42, MS 44, PhD 46, sent along the sad news of the untimely death last year of his eldest son, John, Jr., also a Carnegie Mellon Alumnus (BChemE 70, PhD 84).

**Anna M. Lenahan** (née Longridge), MM 46, now owns and operates a travel agency in Newport Beach CA. She moved to that area after graduation, and worked for several years for the Jet Propulsion Labs.

**Harry T. Dryer**, BS 48, is retired from the Applications Laboratory of Applied Research Laboratories, Inc., is living in Dearborn, MI.

**David I. Sapper**, BS 49, MS 51, PhD 52, is presently a management and technical consultant, following retirement as VP of R&D and Dir. of Corporate Tech. Center of Clevite Industries; retirement is being enjoyed with wife, Shirley (MM 52), with travel to see 4 children, 5 grandchildren, and throughout Europe.

**Joyce R. Rudick** (née Rayvid), BS 61, is carrying out research on women's health at the National Institute of Health; she and husband, Joel (61 Architecture) have 3 sons.

**Michael Zerner**, BS 61, who recently completed a 6 yr. term as Chair of the Department of Chemistry at the Univ. of Florida gave a seminar last year to the CMU Chem. Dept.; he remarks that "the Department certainly has changed since I graduated!"

**Beverly B. Deerhake** (née Babcock), BS 62, writes that she has just returned from Antarctica and Easter Island, after travel to 85 countries and living abroad for 13 yrs, including in Trinidad, Egypt and Norway.

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**Alumni News** (continued from prior page)

**Laura J. Crane**, BS 63, has been the Senior Director of R&D for Advanced Products Research & Tech for Schering Plough Health Care Products in Memphis, TN; she had previously directed research for J.T. Baker Chem. Co. for 13 years. She was a postdoctoral associate at the Roche Institute of Molecular Biology for 3 years after earning a PhD in '72 (Rutgers).

**Richard M. Kopchik**, BS 63, is a Project Manager for a consulting firm (The Catalyst Group), currently managing polymer product and process development programs in the USA and UK.

**John T. Clark**, BS 64, is a Research Associate, with the du Pont Co., Kinston, NC.

**Doris B. Zimmerman** (née Briggs), BS 64, is currently with faculty of the Dept. of Chemistry of Edinboro Univ., while she is a doctoral candidate at Kent State U.

**Eric H. Erenrich**, BS 65, is a Technical Manager in performance additives for Allied Signal Corp. He earned a PhD from Cornell Univ. in '71.

**Evan Melhado**, BS 67, is Assoc. Professor of History and the History of Science and Medicine, and Head of the Medical Humanities and Soc. Sci. Program of the Univ. Illinois.

**Lee Melhado** (née Roddis), BA 68, is Director of Psychiatric Services of The Pavilion, a psychiatric hospital in Champaign, IL; she and husband Evan (above) have 2 sons, Asa and Raif.

**Linda D. Kosturko** (née Daley), BS 71, was promoted to Assoc. Prof. last year in the Dept. of Zoology, Connecticut College. She remarks that her field of prokaryotic molecular biology is "an odd end point for someone who began by studying chemistry. But in my research, protein-DNA interactions, I haven't strayed far from the fold". She is married: daughter 19, son 16.

**Steven G. Link**, BS 72, is a Staff Chemist in the Eastman Kodak Research Lab, responsible for dye synthesis. He remarks that statistical analysis and experiment design were subjects he found important in his profession that were not part of his undergraduate experience at CMU--duly noted: other suggestions from any of you?

**Rita Demarise McCorkle**, BS 73, is Director of the Immune Assay Laboratory of the Genetics & IVF Institute.

**Robert Popichak**, BS 77, is Hazardous Waste Coordinator for the PA Dept. of Environmental Protection, in Pittsburgh, where he was recently ordained as a deacon in the Orthodox Church.

**Egbert deVries**, BS 79, has a private practice in head and neck surgery, working at several hospitals in Pittsburgh (St. Margarets, Allegheny General and Children's Hospital).

**F. Michael Sajovec**, BS 81, recently became a full partner in the intellectual property law firm of Bell Selt-

zer, Park & Gibson, specializing in patent applications in the chemical area. He is married, with two boys.

**Rachel Lea Hunter**, BS 83, is a judicial law clerk to Judge John Brosky, PA Superior Court, having received a JD degree from Pitt law school in 1988; she is now looking to relocate to the southeast, and is seeking law-related employment--any CMU alums out there who can help?

**John P. Moran**, BS 83, is the President and Managing Director of the Atlanta based consulting firm The Learning Corp., serving the telecommunications, utilities, and industrial products industries. He invites alumni in the Rochester, NY, or Atlanta, GA areas to contact him.

**Andrew Sicree**, BS 83, MS 85, is Curator of the Earth & Mineral Sciences Museum and Art Gallery at Penn State Univ., concurrently working toward a PhD in geochemistry. He and wife Rebecca Marshall (MSEE 87) have three children.

**Nancy L. Tolfa**, BS 85, earned an MBA in 91 (Univ. Pittsburgh) and started a consulting firm, NTS Environmental, Inc., in 95, having married CMU grad. Todd Aukerman (85 Chem. E.) in 94.

**Kimberly Alfonsi** (née Orsborn), BS 89, has a new position in environmental compliance auditing; she is a consultant to auto suppliers. She married CMU graduate Jim Alfonsi in November.

**Stephanie Strazisar** (née Kukura), BS 95, is working toward a Ph.D. degree at Cornell University; she was married on July 15, 1995.

## GRADUATE STUDENTS

**Anthony P. Wagener Jr.**, MS 41, retired from the Sherwin-Williams Co. since '82, keeps busy with volunteer activities. He comments that "I always enjoy reading *The Carnegie Mellon Chemist* as it keeps me up to date on the Dept. activities, which are much different from the days I was on campus."

**Monty J. Montjar**, PhD 55, is retired from the Penn. State Univ., Hazleton Campus.

**William D. Ehmman**, PhD 57, some of whose many accomplishments during his tenure on the Chemistry faculty of the University of Kentucky were summarized in the last edition of the *Newsletter*, has received another honor: he was the recipient of the 1996 ACS Award in Nuclear Chemistry.

**James A. Forstner**, MS 61, PhD 62, is the Corporate Counsel for the du Pont Co. Wilmington, DE, and a member of the Board of Directors of the Am. Intellectual Property Law Assoc. and the IP Advisory Committee to the DE Fed. Distr. Court. He lectured in Moscow and Beijing in 1996. His wife Joanne is an active volunteer, including the Jr. Board of DE Med. Center, and daughter is an attorney in Wash. D.C.

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**ALUMNI NEWS** (Continued from prior page)

**Erich C. Blossey**, PhD 63, is on the faculty of the Dept. of Chemistry of Rollins College in Florida. He recently lectured at the Rhône-Poulenc-Rorer Round Table on Combinatorial Chemistry

**Larry Clemens**, PhD 64, is a corporate scientist with the 3M Company - Adhesives Technology Center., - 3M co. in St. Paul, MN

**Marvis Hartman**, PhD 72, now Technical Director, OEM Products Europe, of PPG Industries writes that "the skills taught me at CMU by W. L. Mock have served me well".

**Sharon Jones Elliott** (née Jones), PhD 86, was recently promoted to Supervisor, new Polymer Product Development of Aristech Chemical Corp.

**John Duchowski**, MS 87, PhD 90, became a Sr. Staff Scientist in the Sci. & Lab. Services Dept. of Pall Corp., Los Angeles, after a postdoctoral at the Univ. of Calif. at Riverside; his current work involves the characterization of hydraulic and lubricating fluids. He writes that "The training I received in the Chem. Dept. provided me with a solid background which prepared me very well to face the challenges of the modern industrial market. I look back very fondly at the time I spent at CMU...".

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**Alumnus Cited for Contributions**

**Stephen H. Montgomery**, BS 79, received an Outstanding Research Team Award from his employer, Abbott Laboratories, for scale-up of a protease treatment for HIV and AIDS. The team improved the production process and reduced costs, to make the delivery of the drug commercially viable. The award carried a donation of \$5,000 in Abbot stock to

the university of the winners choice--Stephen made us his choice, for which we thank him and Abbott!

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**THANKS FOR YOUR SUPPORT!**

We want to thank the many Alumni who have made gifts to the University and/or Department. These are extremely important to our efforts to provide a quality educational experience to our students. Gifts may be made to Carnegie Mellon, either as unrestricted gifts to the University, or as gifts designated by you to be used by a particular unit within the University (Chemistry for example!).

The Chemistry Department has many activities in both undergraduate and graduate education that benefit from your generosity in gifts you specifically designate for the Department, including:

- Grants for undergraduate and graduate students for travel to scientific meetings
- Support for Departmental Colloquia
- Support for undergraduate research projects
- The Annual Chemistry Department Retreat

You may designate gifts to the Department by explicit request to that effect, or by instructions that your gift be directed to account number 1-31296. Some of you may be able to take advantage of gift-matching programs at your place of employment. In any case, thanks again for thinking of us!

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**Chemistry Alumni Directory**

Many of you responded affirmatively to offer to oblige your classmates in locating you from our files. If you have not responded, and wish to do so, please check the "Yes" box in the Questionnaire below

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**ALUMNI QUESTIONNAIRE**  
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**Please Complete and Return to**  
Department of Chemistry  
Carnegie Mellon University  
Mellon Institute  
Box 166  
4400 Fifth Avenue  
Pittsburgh, PA 15213-2683

**BUSINESS TEL NO:**  
**HOME TEL NO:**

**Make address available to Chem Alumni?**  
Yes  No

**NAME:**

**CLASS/Degree:**

**(Name at CMU if different):**

**(Please include your degree)**

**ADDRESS:**

**PERSONAL HIGHLIGHTS & COMMENTS**

Department of Chemistry  
Carnegie Mellon University  
Mellon Institute  
Box 166  
4400 Fifth Avenue  
Pittsburgh, PA 15213-2683

ALUMNI NEWSLETTER  
DEPARTMENT OF CHEMISTRY  
CARNEGIE MELLON UNIVERSITY

