



Pitt Chemistry Reaction

ISSUE 3 FALL 1996

IN MEMORIUM

Professor Robert L. Levine, Professor of Chemistry at the University of Pittsburgh from 1946-1982, died on April 1, 1996.

Professor Levine received his B.A. and M.A. from Dartmouth College in 1940 and 1942, respectively and his Ph.D. from Duke University in 1945. A professor of organic and medicinal chemistry, he joined Pitt's faculty in 1946 as an assistant professor. During his 36 years on the faculty, much of Dr. Levine's research centered on the synthesis of heterocyclic nitrogen compounds as potential pharmaceuticals.

In 1950, Professor Levine announced the preparation and use of a new reagent in organic chemistry called lithium diisopropyl amide, commonly called LDA. No one could have predicted at the time the importance of this reagent to synthetic chemistry as a strong base. Most recently, Leo Paquette's *Encyclopedia of Reagents for Organic Synthesis* recognized Dr. Levine's contributions to synthetic organic chemistry.

Through the years, Dr. Levine mentored a large number of undergraduate and graduate students including 30 doctoral students: Lloyd Barkley, Burton Baum, John Behun, Edward Biehl, Sujit Chakrabarty, Daniel Dimmig, Kenneth Dishart, Martin Farrar, Newton Nathaniel Goldberg, William Kadunce, Marwan Kamal, Marvin Karten, Harold Kaufman, William Leake, George Magnus, Thomas McGrath, Alfred Miller, Richard Anthony Moore, David Osborne, Richard Pantone, George Patrick, John Alexander Sanguini, Chester Stephen Sheppard, Gary Maurice Singerman, Jay Sommers, Ilgvars Janis Spilners, Michael Strem, Irving Wender, Myron Wilt, and Philip Zoretic,

Paul Dowd, Professor of Chemistry at the University of Pittsburgh, died on November 21 at the University of Pittsburgh Medical Center of cancer. He was 60 years old.

Professor Dowd was born on April 11, 1936 in Brockton, Massachusetts. He received his

A.B. from Harvard College in 1958 and his M.S. and Ph.D. from Columbia University in 1959 and 1962, respectively. He served in several capacities at Harvard University, including Assistant Professor from 1967-1970. Dowd joined the University of Pittsburgh Department of Chemistry in 1970 where he rose to the rank of Professor in 1977.

Professor Dowd was the recipient of numerous awards and honors including Fellow of the American Association for the Advancement of Science (1987), the Chancellor's Distinguished Research Award of the University of Pittsburgh (1993), the Arthur C. Cope Scholarship Award of the American Chemical Society (1994), Chairman of the Gordon Research Conference in Physical Organic Chemistry (1995), the Jeffery Medal of New South Wales (1995), and the Guthikonda Memorial Award of Columbia University (1996).

Professor Dowd's research was centered on physical organic and mechanistic organic chemistry. In recent years, his seminal research on the mechanism of action of various vitamins, in particular vitamins K and E, gained world recognition. Dowd and his associates elegantly delineated the mechanism of vitamin K-dependent carboxylation and recently discovered metabolite, vitamin E quinone, blocks the activity of the carboxylase, an enzyme that controls blood clotting. This work suggests that vitamin E quinone may offer a safe alternative to slow acting anticoagulants such as warfarin.

Within the Pitt Chemistry Department, Dowd regularly taught undergraduate organic chemistry and honors organic chemistry. During his time at Pitt, Dowd was advisor to 26 graduate students and 15 postdoctoral associates.

He is survived by his wife Susan Ramsmeier Dowd; his daughter Katherine Cramer of Minneapolis, Minnesota; and his son Michael Dowd of Pittsburgh. A memorial service is planned for February 10.

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FACULTY ACCOLADES

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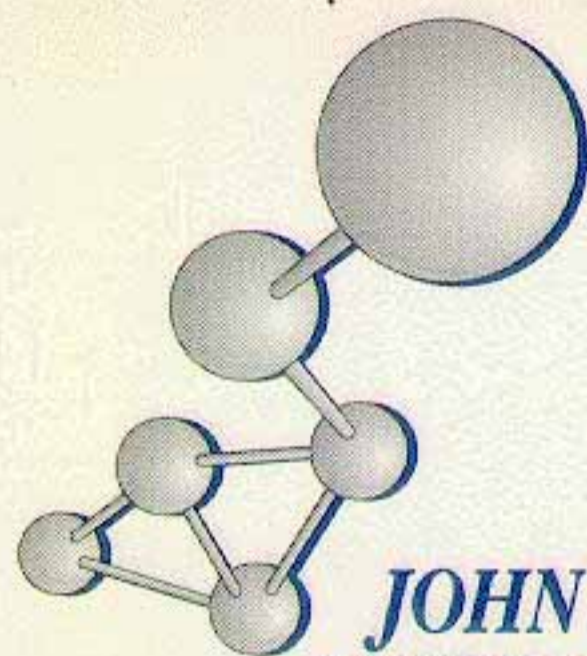
URL: http://www.pit.edu/

~chemrdc/chemistry.html

Sanford Asher: Conover Lecturer, Vanderbilt University; Chairman, XV International Raman Conference; Chancellor's Distinguished Research Award (Senior Division)

Dennis Curran: Distinguished Service Professor; Bayer Professor; University Guest Professor, Kyushu University

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JOHN T. YATES, JR., NATIONAL ACADEMY OF SCIENCE

The Department is delighted to announce that John T. Yates, Jr., R.K Mellon Professor of Chemistry and Director of the University's Surface Science Center, was elected to the National Academy of Sciences in April. Membership in the National Academy is one of the highest honors that can be given to a scientist or engineer, and Professor Yates is the first Academy member elected from the Chemistry Department since Frederick Kaufman, former chairman of the Department.

Professor Yates' research in physical chemistry deals with the structure and spectroscopy of surface species, the dynamics of surface processes and the development of new methods for research in surface chemistry. The field of surface chemistry strongly impacts a wide range of important technologies such as environmental and control sciences, semiconductor processing, and corrosion inhibition.

Yates joined the University of Pittsburgh in 1982. He has been awarded numerous honors including the Silver Medal of the U.S. Department of Commerce, the Stratton Award for Distinguished Research at the National Bureau of Standards, and the Gold Medal, highest award of the U.S. Department of Commerce. In 1987 he won the Kendall Award of the American Chemical Society. In 1989, he was the recipient of the First President's Distinguished Research Award at Pitt. He received the M.W. Welch Award of the American Vacuum Society in 1994.

Identified by the Institute for Scientific Information as the 24th most cited chemist in the world from 1984 to 1991, Yates has co-authored on book, edited four others,

FACULTY

FACULTY ACCOLADES

(continued from cover)

Andrew Hamilton: Japan Society for Promotion of Science Lectureship

Michael Hopkins: Chancellor's Distinguished Research Award (Junior Division)

Kenneth Jordan: Chair, American Conference of Theoretical Chemistry (2003); Adjunct Professor of Chemistry, Carnegie Mellon University; Affiliate Scientist, Pacific Northwest Laboratories

Tara Meyer: NSF CAREER Award

Gilbert Walker: 3-M Company Untenured Faculty Award

John Yates: Elected to the National Academy of Sciences (see article at left)

COMINGS & GOINGS

Scott G. Nelson, Assistant Professor, BS, University of California, Irvine, 1986; PhD, University of Rochester, 1991; NIH Postdoctoral Fellow, Harvard University, 1992-4; Postdoctoral Fellow, Harvard University, 1995. Professor Nelson joined the Department in January 1996.

The development of new synthetic methodology for the rapid and efficient construction of therapeutically relevant natural products forms the cornerstone of our research program. The complex stereochemical and structural motifs embedded in these target molecules are addressed with an emphasis on developing new methodology for asymmetric C-C bond construction. The design and execution of metal-based catalytic protocols for establishing chemoselectivity, regioselectivity, and absolute stereochemical control in these C-C bond forming reactions are a priority. Thus, target-oriented synthesis, new reaction development, and asymmetric catalysis are considered interrelated disciplines which, together, form an integrated research effort.

comprehensive evaluation of the target structure's conformational, steric, and stereoelectronic properties, and emphasize the development of "nontraditional" C-C bond forming reactions.

Devising asymmetric catalytic procedures for stereoselective bond-constructions forms the basis of our reaction development efforts. These efforts span a spectrum of organometallic chemistry, including the study of fundamental reaction processes at metal centers and the design and synthesis of optically active organometallic complexes with applications as catalysts for asymmetric organic reactions.

Eric Borguet, Assistant Professor, BS, Université de Paris-Sud (XI), 1986; PhD, University of Pennsylvania, 1993; Postdoctoral Research Scientist, Columbia University, 1993-1996. Professor Borguet joined the Department in September, 1996.

Our principal interests are the dynamics and structure of interfaces. Interfaces, such as liquid-solid, solid-gas, and solid-solid, are the junction between

authored 494 papers and is the owner of six patents. During the past year, Professor Yates has been on sabbatical leave in Marburg, Germany as a recipient of an Alexander von Humboldt Research Prize. During this time he focused on completing a new book, *Experimental Innovation in Surface Science Research*.

Pancreatistatin, KDO, and oxadaic acid are representative examples of the target molecules of current interest. While these compounds' biological activity make them inherently attractive targets, their structural complexity often requires that new bond-construction strategies be implemented in order to efficiently establish the varied stereochemical arrays. These new strategies are devised through a

media, and are of practical and fundamental interest. Understanding interfaces is relevant to fields as diverse as chemistry, electronics, catalysis, biology, materials, and the environment. Liquid interfaces play an important role in our weather and environment, considering the fact that 70% of the planet is covered by water. The human lung, a biological interface, enables the exchange of oxygen and carbon

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COMINGS & GOINGS

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dioxide between our blood and the air we breathe. The metal-semiconductor interface is a key component in electronic devices. Its interface structure is an unresolved issue of hot debate and major importance.

The study of interfaces requires special experimental tools. In our laboratory these include ultrashort pulse lasers, as well as electrochemical and Ultra High Vacuum (UHV) methods. We use surface-specific laser techniques, such as Second Harmonic Generation (SHG) and Sum Frequency Generation (SFG), to probe interface properties. Lasers can also be used to induce novel chemical and physical phenomena at interfaces. We are also developing new surface spectroscopies based on optical and surface probe microscopy techniques.

Questions we wish to answer include: How do charge and energy flow between adsorbate and substrate? What is the role of the solvent in processes at liquid interfaces? How does the arrangement of atoms at the interface affect the properties of interfaces? How do electronic and vibrational excitation affect interface behavior? Our objective is a better understanding of elementary interface events on relevant time and length scales.

In August 1996, the Department "cut the ribbon" on newly renovated lab space for the **Physical Chemistry Labs**. As part of a phased approach to provide much needed space for the Chemistry Depart-

GIFTS TO THE DEPARTMENT

We are pleased to acknowledge gifts to the University of Pittsburgh Department of Chemistry. The Chemistry Department has four funds which receive regular contributions. The **Pam Basu Memorial Fellowship** was established in 1993 to commemorate a former Ph.D. graduate, Pam Basu, who was killed in a tragic carjacking in 1992. The fund is intended to support doctoral students in the Department, especially women. The **Mary Louise Theodore Prize** is given to two outstanding undergraduate chemists each year, honoring one of the more active analytical chemists in the area. After years of service to the Pittsburgh chemistry community, Mrs. Theodore died in 1992. The **Frederick Kaufman Memorial Fund** was established in honor of the former chairman to support the annual Kaufman Memorial Lecture Series. The **Chemistry Annual Giving Fund** provides support both for undergraduate student and graduate student efforts.

The Department has received numerous donations during 1996 to each of these funds. Limited space does not permit us to acknowledge the hundreds of donations received this year, but we sincerely appreciate these generous gifts.

needed space for the Chemistry Department, the Physical Chemistry Labs, formerly housed on the sixth floor of Chevron Science Center, were moved to a lab suite on the fourth floor of Thaw Hall. Whereas, the old physical chemistry labs were housed in four separate rooms, the new labs are located in a large open lab consisting of 3,900 sq ft. of lab classroom with an adjoining prep lab. Labs were underway during the Fall 1996 Term and students were pleased with the openness of the new space.

Special Seminars for 1996-97

Frederick Kaufman Memorial Lectures: Professor R. S. Berry, University of Chicago, November 6, *The Strange Phase Behavior of Clusters* and November 7, *Topographies and Dynamics of Many-Dimensional Potential Surfaces*.

Bayer Lectures: Professor Francois Diederich, ETH - Zurich, October 9, *From Molecular Recognition to Medicinal Chemistry* and October 10, *Functional Nanomaterials from Fullerene and Acetylene Molecular Scaffolding*.

Pittsburgh Conference Lecture: Professor Jean-Louis Martin, Ecole Polytechnique, Palaiseau Cedex, France, February 5 and 6, titles to be announced.

Phillips Lecture: Professor Larry E. Overman, Distinguished Professor of Chemistry, University of California, April 3, *Pinacol-Terminated Cationic Cyclizations: Scope and Total Synthesis Applications* and April 4, *Recent Studies in Natural Products Total Synthesis*.



GRADUATE AWARDS 1995-1996

SAFFORD GRADUATE TEACHING AWARD 1995

Holly Brison
Gidget Cantrell
Susan Dally
Daniel Haines
Latha Shankar
Alex Sukharevsky
James Zahorchak

1996

Boris Akhremichev
Janet Asper
David Borst
Caroline Driscoll
Brian Haney
Sun Young Kim
Tim Pontz

MELLON FELLOWSHIP 1995

Igor Kurnikov
Hanne Waltenburg
Yimin Qian

1996

Hong Liu
Maria Kurnikova

ASHE FELLOWS 1995

Kathryn Rosi

KAUFMAN FELLOW 1995

Mark Hilfiker

LUBRIZOL FELLOW 1996

Kevin John

MASTER DEGREES

Fall 1995-Summer 1996

Kevin Beer, August 1995 (Siska)
David Maivald, August 1995 (Wilcox)
April Cunningham, December 1995 (Wipf)
Kazutoshi Fujioka, December 1995 (Hamilton)
Michael Dorko, April 1996 (Siska)
Michael Sweetland, April 1996 (Shepherd)
Zhizhen Zheng, April 1996 (Dowd)
Jennifer Braun, August 1996 (Grabowski)
Eric Campbell, August 1996 (Curran)
Ya Chen, August 1996 (Shepherd)
Charsetta Grant, August 1996 (Wipf)
Shaojing Tong, August 1996 (Cohen)

PH.D. DEGREES

Fall 1995-Summer 1996

Jiazhan Xu, "Infrared Reflection Absorption Spectroscopy Studies of Adsorbates on Transition Metal Surfaces", August 1995 (Yates) Postdoc, University of Pittsburgh.

Deborah Evans, "Relaxation Theory Approaches to Quantum Dynamics of Condensed Phase Systems", December 1995 (Coalson) Postdoc, University of New Mexico, Albuquerque, NM.

Timothy Pollagi, "Multiply Bonded Transition Metal Complexes and Polymers", December 1995 (Hopkins), Sandia National Laboratories, Albuquerque, NM.

Amy Smentkowski, "The Chemical Reactivity of Metal and Metal Oxide Surface", December 1995 (Yates), General Electric Corporation, Schenectady, NY.

Aaron Balog, "Studies of Novel Sequential Radical and Anionic Annulations", April 1996 (Curran), Memorial Sloan-Kettering Cancer Center, New York.

Holly Bevsek, "Electron Spectroscopy and Theoretical Studies of the Chemical Reaction Dynamics of Molecular Penning Ionization", April 1996 (Siska) Postdoc, UC Berkeley, CA.

Xingguo Chen, "Ultraviolet Resonance Raman Studies of N-Methylacetamide Related Model Peptides", April 1996

Kathryn Ross
Cheslan Simpson

1996

Paul Badger
Jason Bemis
Carrie Brennan
Joey Lee Methot

BAYER FELLOWS

1995

Brian Haney
Janice Steckel

Bayer Fellows (Continue)

1996

Tim Peelen
Alexey Rivkin

ARISTECH FELLOW

1995

Brendan Orner

1996

Amy Yahner

Jian-Ge Chen "Development and Applications of Chromatographic and Detection Methods for Potential Neuroactive Carbamates and Peptides", August 1995 (Weber) Olin Corporation.

Yuntae Kim, "Synthetic and Mechanistic Studies of Epoxyketone Natural Products", August 1995 (Wipf) Postdoc, California Institute of Technology.

Lung Huang Kuo, "Acceleration of Organic Reactions by Hydrogen Bonding. Synthesis of and Study of A New Class of Arylureas", August 1995 (Curran) Postdoc, Ohio State University.

Elizabeth Longley, "Product Ion Angle-Energy Distributions in Metastable Helium Penning Ionization", August 1995 (Siska) Assistant Professor, University of St. Thomas, MN.

Elizabeth Wise, "Quantitative Evaluation of a Smart Gel: The PVA/Borate System and Its Response to Cis-Diols", August 1995 (Weber), Brookdale Community College, Wincroft, NJ.

(Asher), NIH, Bethesda, MD.

Michael Garguilo, "Amperometric Enzyme Sensors for Real-Time Measurements of Peroxide, Choline, and Acetylcholine in the Extracellular Fluid of Living Animals", April 1996 (Michael), Department of Energy, Livermore, CA.

Susan Humphrey, "Electronic Spectroscopy of Aromatic Alcohols and Their Complexes with Ammonia. Probing of Base Reactions in the Gas Phase.", April 1996 (Pratt), Postdoc, UC Santa Barbara, Santa Barbara, CA.

Daniel Love, "A Study of Electronic Excitation and Temporary Anion Formation in Molecules by Electron Impact", April 1996 (Jordan), Instructor, Penn State, McKeesport, PA.

Michael Palovich, "Acylgermanes and Acylsilanes as Acceptors in Radical Cyclizations", April 1996 (Curran), Postdoc, University of Virginia, Charlottesville, VA.

BACCALAUREATE BRAVOS

Richard Bormett, "Development of Novel Spectroscopic Instrumentation and Methodologies: Vibrational Circular Dichroism Measurements of Azide Bound to Metalloenzymes and UV Raman Spectroscopy of Chemical Vapor Deposited Diamond", August 1996 (Asher), Renishaw, Inc., Schaumburg, IL.

Nicholas DeMello, "La Chimie Dans L'Espace-Temps: Stereoselection with Time Dependent Methods", August 1996 (Curran), Postdoc, UCLA, CA.

Eun-il Kim, "A Study of Electrostatic and Substituent Effects in Binding Catalysis and Intermolecular Interactions", August 1996 (Wilcox), Postdoc, Johns Hopkins, Washington, DC.

Sung-Bo Ko, "Enantioselective Synthesis of Camptothecin Using [4+1] Radical Annulation Reaction", August 1996 (Curran), Postdoc, University of Pittsburgh.

Sungtaek Lim, "Total Synthesis and Structural Studies of Bisoxazole Marine Natural Products", August 1996 (Wipf),

FALL 1995 STUDENT AWARDS

MESSER AWARD .. John E. Schrecengost

SILVERMAN AWARD Mark E. Braun

ANALYTICAL AWARD Shaun Pardi

FRESHMAN AWARD Sami Barmada

SPRING 1996 STUDENT AWARDS

PHILLIPS MEDAL Walter Klein

MARY LOUISE THEODORE

PRIZE Michael Logman

..... Tom C. Hu

LUBRIZOL

SCHOLARSHIP Kristin Hogan

..... Edward Petri

SACP COLLEGE AWARD ... Shaun Pardi

AMERICAN INSTITUTE OF

FALL 1995 B.S. RECIPIENTS

Carrie Carothers, B.S.

Chad Crawford, B.S.

Jennifer Forestieri, B.S.

Joy Grosko, B.S.

Nader Hadavi, B.S.

Paula Hoffman, B.S.

Brian Klein, B.S.

Todd E. Langer, B.S.

Francesco Malcangi, B.S.

Ramesh Narinesingh, B.S.

Paul Pirozzola, B.S.

Stephen Podobinski, B.S.

Melinda Stamm, B.S.

Mark S. Stoner, B.S.

Mark A. Waksmonski, B.S.

Sean T. Weir, B.S.

Ralph Wuenstel, B.S.

Kyong-Han Yi, B.S., *Cum Laude*

SPRING 1996

Postdoc, Harvard.

Kacey Marra, "Synthesis, Characterization, and Applications of Novel, Low Surface Energy Poly(amide urethanes)", August 1996 (Chapman), Postdoc, Emory University - School of Medicine, Dept. of Surgery, Atlanta, GA.

Sunil Paliwal, "Design Synthesis and Evaluation of a Molecular Torsion Balance and a Chiral Concave Acid", August 1996 (Wilcox), Postdoc, California Institute of Technology, CA.

Yimin Qian, "Design, Synthesis and Biological Evaluation of Protein Isoprenyltransferase Inhibitors as Novel Anti-Tumor Agents", August 1996 (Hamilton), Postdoc, University of Pittsburgh, PA.

Sonia Rondon, "Surface Characterization of Supported Molybdenum Catalysts", August 1996 (Hercules).

Srikanth Venkatraman, "Azoles and Azole Natural Products", August 1996 (Wipf), Postdoc, University of Illinois.

Ji Yang, "Hydrogen-Bonding Controlled Self-Assembly", August 1996 (Hamilton), Postdoc, UC-Irvine, CA.

Jianxiang Zhang, "Spectroscopic Probing of Aerosols using Morphology Dependent Simulated Raman Scattering", August 1996 (Aker), Postdoc, Dept. of Chem. Engineering, University of Pittsburgh, PA.

AMERICAN INSTITUTE OF
CHEMIST AWARD ... Anna Simeone

MERCK AWARD Mark E. Braun
..... John Schrecengost

VALSPAR AWARD Patrick Frey
..... Justin Jureller
..... Diane Luci

FALL 1996 B.S. RECIPIENTS

MESSER AWARD Kristin Hogan
SILVERMAN AWARD Jim Goldbach
ANALYTICAL AWARD .. Tracey Olkowski
FRESHMAN AWARD ... Erin Dougherty

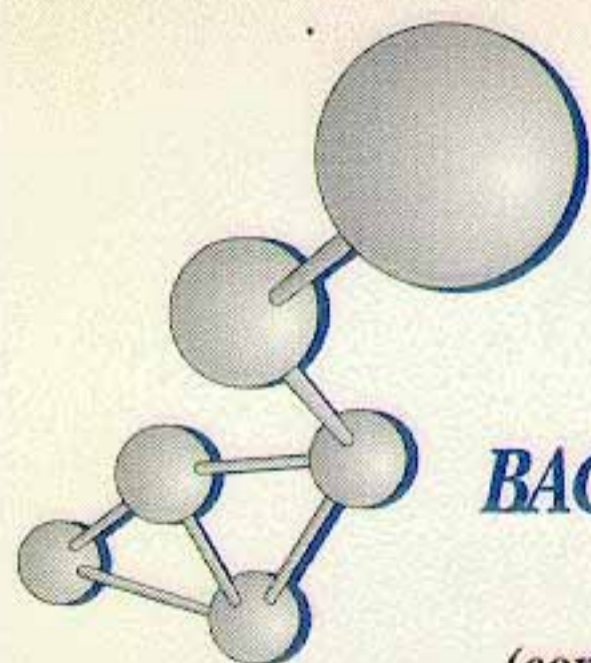
SUMMER 1995 B.S. RECIPIENTS

William E. Alexander, B.S.
Paula A. Carrick, B.S.
Kurt Crytzer, B.S.
Aaron Forsythe, B.S.
Christopher Foust, B.S.
Doreen Fulmer, B.S.
Eric S. Hill, B.S.
Kurt W. Kurvach, B.S.
John R. Schneider, B.S.
Brad States, B.S., *Cum Laude*

SPRING 1996 B.S. RECIPIENTS

Brian Beitko, B.S., *Cum Laude*
Mark E. Braun, B.S., *Magna Cum Laude*
Kenneth Brown, B.S.
Sekhar Dharmarajan, B.S., *Summa Cum Laude*
Ashley Dodson, B.S., *Cum Laude*
James Evans, B.S.
Michael Feeney, B.S.
Matthew W. Gordon, B.S.
Jennifer Grimm, B.S.
Ethan Hoberman, B.S.
Tom C. Hu, B.S., *Magna Cum Laude*
Kevin Huncik, B.S.
Walter Klein, B.S. *Summa Cum Laude*
Michael Logman, B.S., *Magna Cum Laude*
Robert Manier, B.S.
Alexandra Matla, B.S.
Edward A. Narke, Jr., B.S.
Michelle Navrotski, B.S.
Thu-Suong Nguyen, B.S., *Cum Laude*
Jeffrey Niederst, B.S. *Cum Laude*
Shaun Pardi, B.S., *Summa Cum Laude*
Jennifer Pervuznik, B.S.
Gina Rakosky, B.S.
Steven Reinstadtler, B.S.
Sean Richardson, B.S., *Magna Cum Laude*
John Schrecengost, B.S., *Summa Cum Laude*
Anna Simeone, B.S.
Marla Zawacki, B.S.

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BACCALAUREATE BRAVOS

(continued previous page)

SUMMER 1996 B.S. RECIPIENTS

Stephen Edward Banyas, B.S.
Kathleen Ann Gallagher, B.S.
Christopher Alfred John, B.S.
Hyung Tae Kwak, B.S., *Cum Laude*
Lara R. Lewis, B.S.
Shawn Richard Lowery, B.S.
William Branham Parish, B.S.

PIECE OF THE PAST

As we slipped past the Department's 120th anniversary in 1995, the Department noted it is fast approaching the granting of its 1,000th PhD. Through the meticulous record keeping of Professor Alexander Silverman, the Department's second chairman, the aid of the University Libraries, and a fair dose of luck, we have the good fortune of having a complete list of doctoral dissertations awarded (less a 1913 dissertation by Clinton Willard Clark). Chemistry has changed so dramatically in the last 87 years, we thought it might be interesting to our readers to see the first doctoral dissertations awarded by the Department. We've listed the dissertations awarded through 1923, primarily so we could include our more illustrious graduates, C.G. King, who went on to be the first to isolate and identify Vitamin C. Yes, all of the early PhD's were awarded to men. The first PhD awarded to a woman in Chemistry at Pitt was in 1926 to Rachel Hoyle Kesler for her *Derivatives of α -Hydroxy- β -Naphthoic Acid*.

Hugh Clark. *An Improved Method for the Manufacture of Hydrogen and Lamp Black.* (1913)
Harry Percival Corliss. *The Distribution of Colloidal Arsenic Trisulfide between the Phases in the System Ether, Water, and Alcohol* (1913).

Lester Albert Pratt. *Studies in the Field of Petroleum* (1913).

Shelley Ruth Parkerson, B.S.
Michael David Pazman, B.S.,
Summa Cum Laude
Shahrokh Safaeian, B.S.
Cynthia Leona Sherman, B.S.
Ann Marie Vislosky, B.S., *Magna Cum Laude*
Charles Michael Walkup, B.S.

ACS STUDENT AFFILIATES

This term the Department received word that its American Chemical Society-Student Affiliates chapter had received its sixth consecutive national recognition with an Outstanding Chapter Award. So, what does the ACS-Student Affiliates actually *do*? Jim Goldbach, current Vice President, recently answered just that question. "Well, we do lots of stuff. As one of the University of Pittsburgh's largest student organizations, our goal is to continue the American Chemistry Society's history as an educational and yet fun organization. We provide timely, state-of-the-art information to our members about the varied opportunities waiting for them in the field of Chemistry through guest speakers who share their expertise at our weekly meetings. These speakers range from chemical industry representatives, chemistry professors and cutting-edge research scientists, to career advisors.

Additionally, the ACS strives to maintain an environment in which Chemistry undergrads can socialize with each other and with students who have the same or similar interests. At open meetings, ACS members

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Robert Rex Shively. *A Study of Magnesia Cements* (1913).
Roy H. Uhlinger. *The Formation of Utilizable Products from Natural Gas* (1914).
Raymond Augustine Dunphy. *Theory of Distillation and the Laws of Henry and Raoult* (1915).
Sidney Liebovitz. *Study of Dynamics of Esterification* (1915).
Harold Arthur Morton. *Study of the Specific Rotatory Power of Organic Substances in Solution* (1915).
Joshua Chitwood Witt. *Oxidation and Reduction Without the Addition of Acid. I. The Reaction between Ferrous Sulfate and Potassium Dichromate. II. The Reaction Between Stanous Chloride and Potassium Dichromate.* (1915)
Arthur Bert Coleman. *Tetraiodofluorescein, Tetraiodoeosin, Tetraiodoerythrosin and of Their Derivatives* (1917).
Rolla Woods Miller. *On the Mechanism of the Potassium Chlorate-Manganese Dioxide Reaction* (1917).
Granville Akers Perkins. *Phthalic Anhydride and Some of Its Derivatives* (1917).
Asher Franklin Shupp. *Phenoltetraiodophthalein and Some of Its Derivatives* (1917).
Henry R Curme. *Butadiene (Diacylene). II. Analysis of Gas Mixtures by Distillation at Low Temperatures and Low Pressures. III. The Precise Analytical Determination of Acetylene, Ethylene, and Methyl Acetylene in Hydrocarbon Gas Mixtures* (1919).
Isaac Drogin. *The Effect of Potassium Chloride on the Inversion of Cane Sugar by Formic Acid* (1919).
Charles Otis Young. *Tetrabromophthalic Acid and Its Condensation with Some Primary Amines* (1919).
Emil Harold Balz. *Derivatives of 2,4,6-Trinitrobenzaldehyde* (1920).
Robert Herman Bogue. *The Properties and Constitution of Glues and Gelatins* (1920).
Harvey Gerald Elledge. *On the Solubility of the Calcium and Magnesium Salts of Palmitic, Stearic and Oleic Acids* (1921).
Harry Elmer Gill. *Investigation of the Utilization of Waste Leather* (1922).
Adelbert William Harvey. *Sulfonation of Aromatic Hydrocarbons Under the Influence of Temperature. I. Sulfonation of Benzene* (1922).
William Franklin Henderson. *The Chemical Properties of Cotton Linters* (1922).
Arthur Mark Howald. *The Catalytic Ammonolysis of Beta-Naphthol and Chlorobenzene in the Vapor State* (1922).
Royce Jennings Noble. *Azo Derivatives of Anthraquinone* (1922).
Gilbert Edward Seil. *Chemical Reactions as Influenced by the Subdivision of the Reaction Substances* (1922).
William Stericker. *Properties of Sodium Silicate Sols* (1922).
Thomas Briley Downey. *Derivatives of 2,4-Dinitrobenzaldehyde.* (1923).
Charles Luther Jones. *The Retorting of Shale Oil* (1923).
Charles Glen King. *Derivatives of 2,4-Dinitro-benzaldehyde* (1923).
Blaine Benjamin Wescott. *Catalytic Decomposition of Formic Acid* (1923).

ACS STUDENT AFFILIATES

(continued previous page)

have a chance to get to know each other better and make new friends, not to mention the opportunities that abound at our regularly-scheduled, merrymaking parties. Oh, yeah...we also have PIZZA! Membership in ACS also means an opportunity to participate in the annual trip to PittCon, the National Analytical Chemistry Convention, being held

November 15th, we had our fall term awards ceremony. And, finally for this semester, our holiday party included great food from Duranti's restaurant and a lot of fun to start the holiday season.

During this upcoming semester, we have even more entertainment activities planned. In January, we will attend the sym-

students. One Saturday each semester, high school students are invited to come to Chevron, hear a lecture, and participate in a variety of lab experiments. As ACS members, we provide one-on-one instruction for the students on how to perform their experiment and on basic lab procedures. For those high school students

this year in Atlanta. Our most visible activities are the ACS hoagie and Chemistry exam sales. Just about everyone having a Chemistry class in Chevron's lecture halls has (at one time or another) eaten an ACS hoagie for lunch while studying from copies of past Chemistry exams. The funds raised by these sales help to defray the weekly meeting expenses for refreshments and other incidentals, as well as the cost of the food and supplies at our social functions.

What do we do for fun?" On October 25th, we had our first annual Halloween pumpkin-painting party. With great turnout, we decorated over 30 pumpkins, ate lots of food, and enjoyed each other's company. On

phony, and have another holiday party; this time George has graciously invited us to his house. The week of the 10th in March will be our annual trip to PittCon, held in Atlanta. As we do each year, we hope to take one of the largest representations of undergraduates from any other university. If this does not top everything off, we hope to take a tour of a beer processing plant as our final "hurrah" before the end of the year.

Perhaps most importantly, Pitt's ACS-Student Affiliates sponsors two major volunteer outreach programs, Saturday Science Academy and Honors Organic. The Saturday Science program is designed to provide basic chemistry instruction and lab experience for minority high school

designated as exceptional, the ACS provides an Honors-level Organic Chemistry program. Outstanding high school students hear an organic chemistry lecture by our own illustrious George Bandik, participate in actual organic chemistry. Again, the ACS members help the student to understand the background information for their experiment and the lab technique to do it. Both of these programs have had a great success and provide a unique experience for high school aged students.

So that's the University of Pittsburgh ACS-Student Affiliates. And we're very proud of them!

WHERE ARE THEY NOW...

Barbara Jean Anderson, B.S. 1983, Market Development Manager, PPG Specialty Chemicals Division Research and Development, Monroeville, PA.

Craig Bachman, B.S. 1992, Chemistry/Physics Teacher, Andrew Jackson High School, Kershaw, SC.

Amy Bartek-White, B.S. 1988, Technical Sales and Marketing, TIGG Corporation, Pittsburgh, PA. Working with activated carbon and selective media liquid phase and vapor phase modular adsorbers and systems.

Brett Becker, B.S. 1995, Chemist, Abbott Laboratories, Waukegon, IL.

James H. Benedict, Ph.D. 1950, Retired, Cincinnati, OH.

Gary T. Beveridge, B.S. 1979, Account Manager, Air Products and Chemicals, New Kensington, PA.

Walter Von Braunsberg, B.S. 1987, Product Manager, D.A. Stuart Company, Willowbrook, IL.

Jan Brill, M.S. 1984, Product Development Project Manager, AgrEvo Environmental Health, Montvale, NJ.

Sondra Frisbie Budge, B.S. 1975, M.S. 1976, Georgetown, TX.

J. Blake Casher, B.S. 1970, Physician, Okemos, MI.

Jenq-Sian Jim Chang, Ph.D. 1977, Vice President, Prolix Labs Corporation, San Jose, CA.

Meredith Matthews Clayton, B.S. 1969, Science Teacher, Sayreville War Memorial High School, Parlin, NJ.

Michael R. Collins, M.S. 1994, Assistant Scientist, Radiochemical Synthesis Group, Pfizer Pharmaceuticals, Inc., Groton, CT.

Keith L. Constantine, B.S. 1986 (Phillips Medal), Research Investigator, Bristol-Myers Squibb Pharmaceutical Research Institute, Princeton, NJ. Ph.D., CMU 1991. "My research focuses on NMR and modeling studies of peptides of pharmacological interest. eg. *J. Am. Chem. Soc.* **117**, 10841-54.

Amy L. Crocetti, B.S. 1995, Chemist, Ranbar Electrical Materials, Manor, PA.

Linda Andrascik Ellena, B.S. 1983, Supervisor-Analytical Chemistry, Energy Biosystems, The Woodlands, TX.

Deana Schoch Foley, B.S. 1981, M.S. 1985, MAT, 1989, Chemistry Teacher, Penn Hills High School, Pittsburgh, PA.

Faye Ilene Francy, MSc, 1982, Engineer/Program Manager, Aerospace Engineering, Baltimore, MD.

Stephen M. Frank, B.S. 1988, Associate Project Engineer, Schlesinger Engineering, Inc., Ingomar, PA.

S. Gangadharan, Ph.D., 1969, Chief Executive of the Board of Radiation and Isotope Technology of the Department of Atomic Energy, India. He has also been serving as Project Director of India's

National Centre for Compositional Characterization of Materials.

Janie Michelle Gwinn, B.S., Senior Chemist, Mylan Pharmaceuticals, Morgantown, WV. Working on Ph.D. at Virginia University.

Stuart G. Hammerschmidt, B.S. 1991, Manager of Technical Operations, Shore Chemical Company, Pittsburgh, PA.

Robert C. Haney, B.S. 1971, Director, Sales and Marketing, American Ecology Chemical Services, Santa Ana, CA. "Just signed on with this company in this position, February 1996".

Valerie A. Hill, B.S. 1977, Manager, QA/Technical Development, Akron, OH.

Francis T. "Jay" Jarvis, M.S. 1975, Criminalist, Georgia Bureau of Investigation Crime Laboratory, Macon, GA.

Debora Rae Rutter Jeske, Ph.D. 1978, Department Leader, Coating Technology Champion International, Applied Technologies, West Nyack, NY.

Craig R. Johnson, Ph.D. 1983, Program Director, Department of Chemistry and Physics, Carlow College, Pittsburgh, PA.

Kelly L. Johnson, B.S. 1990, Associate Scientist, R.W. Johnson Pharmaceutical Research Institute, Raritan, NJ.

Dale E. Johnston, B.S. 1972, M.D. 1977, Diagnostic Radiologist, Radiology Associates, Little Rock, AR.

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WHERE ARE THEY NOW...

(continued previous page)

Edwin L. Jones, Jr., M.S. 1974, Senior Criminalist, Ventura Sheriff's Crime Laboratory, Ventura, CA.

John H. Nair, M.S. 1948, Retired in 1983 from General Electric as a Staff Toxicologist, Waterford, NY. "Since leaving Pitt worked at Mellon Institute as a Senior Fellow Chemistry Hygiene Fellowship (Union Carbide), at Syracuse University, Research Corporation, and as a Toxicologist

at the University of Pittsburgh. I am Chairman of the Liberal Arts Department, Co-Chairman of the Assessment Committee, and Director of Student Testing. My hobbies include playing piano, and I have 5 solo piano cassettes/CD's which are being marketed nationally."

Marilyn Kruth Spohn, (formerly Pasteur

Pamela Zamko Kaska, B.S. 1980, Chemical Laboratory Technician, USX Corporation, Clairton Works, Clairton, PA.

G. Stephen Kelsey, B.S. 1969, Ph.D. 1975, Director, Primary Battery Development, Duracell Worldwide Technology Center, Needham, MA.

Scott L. Kincaid, M.S. 1992, Chemist, Wyeth Ayerst Research, Pearl River, NY. "In 1995 transferred from Princeton, NJ, received a promotion, and first child was born, Ashley Marie."

Fred E. Kiviat, Ph.D. 1968, Research Associate, DuPont Chemical, Seaford, DE.

Joseph J. Kohler, III, B.S. 1977, Dentist, Erie, PA.

Donald E. Koontz, M.S. 1948, Ph.D. 1951, Retired, Summit, NJ.

Kenneth A. Kuiken, Ph.D. 1943, Retired from Procter and Gamble, Memphis, TN, 1984.

Lois Blotter Kuiken, B.S. 1943, Retired from University of Tennessee Medical Unit, Memphis, TN, 1984

James M. P. Kyros, B.S. 1980, General Dentist, Pittsburgh, PA.

James H. Longbon, B.S. 1973, Regional Account Manager, Armco Specialty Flat-Rolled Steels, Charlotte, NC.

Sherri R. Lovelace, Ph.D. 1992, Assistant Professor in Chemistry, Youngstown State University, Youngstown, OH.

George W. Luther, III, Ph.D. 1972, Professor, Chemical Chemical Oceanography (Joint Appointment in Chemistry Department) University of Delaware, College of Marine Studies, Lewes, DE. I am Chair-Elect (1996) for the ACS Division of Geochemistry. In 1995 I was the Chair of the Gordon Research Conference in Chemical Oceanography.

Richard F. Marciniak, B.S. 1974, Technical Service Representative, Architectural Coatings, PPG Industries, Inc., Pittsburgh, PA.

Dennis McCullough, B.S. 1984, Ph.D. 1988, Project Leader, Bayer AG, Leverkusen, Germany.

Dr. J. Dean Minford, M. Litt, 1948, Ph.D. 1951, Retired from Alcoa Research Lab as Scientific Associate in 1983. After retirement spent eight years writing *Handbook of Aluminum Bonding Technology and Data*, covering history of adhesion science including more than 4500 references. Also developed and edited *Treatise on Adhesion and Adhesives* Vol. 7 selected by committee D-14 of ASTM. This was only the 13th award in 25 years since the awards inception. The award recognized 25 years of outstanding accomplishments on the durability of adhesive bonded structures. As a result I was asked to contribute Chapter 9 in *Lee's Adhesive Bonding Books* on durability evaluation of adhesive bonded structures.

Robert B. Moberley, M.S. 1982, Senior Forensic Chemist, U.S. Postal Inspection Service, Dulles, VA.

Jennifer Lynn Mueller, B.S. 1993, Chemist, Wright Laboratory Services, Middletown, PA.

and Regulatory Affairs Specialist" at General Electric Silicone Products Division, Waterford, NY.

Michael J. Najjar, B.S. 1984, Sales Representative, Plastics-Techmer PM, Rancho Dominguez, CA.

Joseph B. Natowitz, Ph.D. 1965, Professor of Chemistry at Texas A&M University, was the winner of the 1995 A.C.S. Award in Nuclear Chemistry.

Lily Ng, Ph.D. 1985, Associate Professor, Cleveland State University, Cleveland, OH.

Joseph J. O'Shanka, Senior Engineer, Westinghouse Electric Corporation, Power Generation Engineering Labs, Casselberry, FL.

Luann Marshall Pugh, B.S. 1980, Ph.D. 1984, Research Associate, deNemars and Company, DuPont, Wilmington, DE.

David F. Plusquellic, B.S. 1992, Ph.D. 1992, Contractor, National Institute of Standards and Technology, Department of Commerce, Gaithersburg, MD.

Tyraine D. Ragsdale, B.S. 1988, President, Grand Hank Science Products, Inc., Philadelphia, PA. "Tyraine has since retired as a Research Scientist from the R. W. Johnson Pharmaceutical Research Institute, Spring House, PA at age 30 and founded a company called Grand Hank Scientific Productions, Inc. The company develops music based on science programs to show students the fun side of science and to increase student interest in the field. *Science World* has spotlighted Tyraine, a.k.a. Grand Hank, as he raps about and turns students onto science.

Jayendran C. Rasiah, Ph.D. 1965, Professor of Chemistry, University of Maine, Orono, ME.

Francis J. Rattay, B.S. 1968, M.S. 1970, Manager, Regulatory Affairs, Bayer Corporation, Pittsburgh, PA.

Christopher D. Rigone, B.S. 1994, Scientist, Westinghouse-Bettis Atomic Power Lab, West Mifflin, PA.

Jennifer A. (Hogan) Robertson, B.S. 1994, "First child, Rachael Joan Robertson, born on March 21, 1995. I am currently working towards a Master's Degree in Environmental Education at Slippery Rock University."

Professor Hurd W. Safford, Ph.D. 1941, Retired from the Department of Chemistry, University of Pittsburgh.

Ramzi Saleh, Ph.D. 1974, Research Associate, EXXON Corporation, Annandale, NJ.

Jay R. Sommers, Ph.D. 1965, Manager of Clinical and Scientific Documentation, Kimberly-Clark Corporation, Roswell, GA.

Daniel Soose, B.S. 1990, M.S. 1993, Medicinal Chemist, Eli Lilly and Company, Indianapolis, IN.

Roger A. Sorbo, B.S. 1963, Ph.D. 1971, Professor, North Central Bible College, Minneapolis, MN. "I'm married with 3 children and 1 grandchild. At the College, I

B.S. 1977, Gibsonia, PA. I have changed career path from Chemistry to Nursing (an R.N.) and expect to enter the workforce in 1996. My husband and I recently celebrated the birth of our sixth child, William Philip Spohn in September.

Robert R. Steiner, Forensic Chemistry, 1981, Senior Forensic Scientist, Virginia Division of Forensic Science, Richmond

Kimberly Ann Stewart, B.S. 1992, Lab Technician, Cerdec Corporation, Draken Products, Washington, PA.

Robert C. Stough, B.S. 1976, Attending Physician, Buchanan Family Health Center, Buchanan, VA.

Michael D. Swerdloff, Ph.D. 1972, Assistant Director Human, Sandoz Pharmaceutical Corporation, East Hanover, NJ.

Leonard J. Swicklik, Ph.D. 1954, Retired Assistant Plant Manager, Distillation Process Industry Divisions, Eastman Chemical Company, Rochester, NY.

Janet Tarino, Ph.D. 1972, Associate Professor of Chemistry, Ohio State University at Mansfield, Mansfield, OH.

B. K. Trivedi, Ph.D. 1979, Associate Research Fellowship, Parke-Davis Pharmaceutical Research, Ann Arbor, MI.

Michael P. Turberg, Ph.D. 1990, Senior Analytical Chemist, Lilly Research Laboratories, Greenfield, IN. In September of 1991 Mike received the Lilly Research Laboratory President's Recognition Award in recognition of his technical contributions to a project that completed an FDA method trial.

Kenneth J. Voytell, Jr., B.S. 1984, M.B.A. 1989, Product Development Manager, Biocides, Great Lakes Chemical Corporation, Delatvr, GA.

James E. Whitlinger, B.S. 1974, Development Chemist, PPG Industries, Inc., Springdale, PA.

Lawrence J. Winans, DMD, Lewisburg

Richard A. Winschel, B.S. 1976, Research Group Leader, CONSOL, Inc. Library,

Robert A. Wolf, B.S. 1947, Retired from U.S. Bureau of Mines, Munhall, PA. I worked at Westinghouse, Femco and other companies and as a consultant to the Department on explosion and blast effects from 1955-1972.

Zhi Xu, Ph.D. 1991, Professor, Department of Chemistry, University of Missouri, St. Louis, MO.

Michelle Haja Zemencik, B.S. 1982, 1986, and **James F. Zemencik**, B.S. 1985, D.M.D. 1985, in family dental practice with husband in Bridgeville, PA.

Wei Zhang, Ph.D. 1993, Research Chemist, Chemical Discovery, DuPont Agricultural Products, Newark, DE.

Jeffrey D. Zubkowski, B.S. 1979, Assistant Professor of Chemistry, Jackson State University, Jackson, MS.

