



Volume 24, Number 1

Department of Chemistry and Biochemistry

Fall, 2003 Newsletter

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Chair's Message



William M. Gelbart, Chair

First I want to thank the large number of you who were generous enough to respond to our recent appeals for contributions to help offset the severe budget cuts that have been levied on us (along with all other departments in the College here at UCLA). This past year has been particularly hard, as we rebounded from our first round of cuts only to face additional and larger ones for the current and upcoming years. But the good news is that our faculty and staff continue to rise to the occasion and to excel on all fronts. In addition to the prestigious awards won by Fred Hawthorne, Ken Houk, and Wayne Hubbell that are described on the next page, we have just learned that Fraser Stoddart is the winner of the 2004 Nagoya Medal of Organic Chemistry, to be conferred on him in Japan at next summer's 15th International Congress of Organic Synthesis. And faculty throughout the Department continue to

contribute substantively to new research and outreach initiatives within the California NanoSystems Institute (CNSI) and the Materials Creation Training Program (MCTP) described for the first time in the last Newsletter. A special forum – the “Cram Debate” – was initiated on September 22 as Jim Heath and Ed Chandross argued the cases for and against a future for molecular computers before an audience of hundreds. A heartwarming surge of contributions to the Daniel Kivelson Undergraduate Fellowship Fund will make it possible for the first student to benefit from this support as early as next quarter. And the 2nd Kivelson Lecture will be given on December 1 by Gilles Tarjus, Dan's most recent and

long-time collaborator. Finally, plans are well in place for an exciting Seaborg Symposium on December 6 (see pages 10 and 12) to help commemorate the installation of our new 800 Mhz NMR facility and to honor Seaborg Medalists Ad Bax of the NIH and Alex Pines of Berkeley for their pioneering contributions to NMR. We look forward to seeing as many of you as possible at this and other departmental occasions in the near future.

Very best wishes,

Bill Gelbart



June 2003 Chemistry and Biochemistry Commencement

SAVE THE DATE

Saturday, December 6, 2003

Seaborg Symposium: Magnetic Resonance in Chemistry, Biology and Medicine
Seaborg Dinner and Medal Presentation

See Page 12 for details

NEWS

Faculty Awards



M. Frederick Hawthorne is the 2003 Winner of the Monie A. Ferst Award. This award, administered by the Georgia Institute of Technology Chapter of the

Sigma Xi Society, recognizes those who have made notable contributions to motivation and encouragement of research through education. The award is made every year to a person who has touched and inspired his or her research colleagues in a manner that can be documented by their subsequent scientific accomplishments. The award was named after the late Monie A. Ferst, an outstanding engineer and businessman, who in 1933 co-founded the Georgia Tech Research Institute out of personal funds.

Believing strongly in the idea that basic research conducted by science faculty would significantly enhance the effectiveness of their teaching, he endowed the \$5,000 Ferst Medal to honor those who have made notable contributions to the training of scientists in the academic arena.



Kendall N. Houk is one of three American scientists to be elected this year to the International Academy of Quantum Molecular Science. The

Academy was founded in 1967 in Menton, France, to honor scientists of all countries "who have distinguished themselves by the value of their scientific work and their role as pioneer or leader of a school in the broad field of the application of quantum mechanics to the study of molecules and macromolecules." Membership involving scientists under the age of 65 is limited to 35 worldwide, and includes photochemists and molecular scattering theorists as well as quantum chemists.



Wayne L. Hubbell received the Zavoisky Award of the Russian Academy of Sciences, established in 1991 to honor the contributions of E. K.

Zavoisky to the discovery of EPR over fifty years ago. The award was presented at a public ceremony on the 19th of September, in Kazan, Russia, attended by officials of Tatarstan Republic, Kazan City, and Kazan State University. The ceremony was the capstone of a two-day workshop on Modern Developments in Magnetic Resonance, and included receptions, banquets, and performances by a full string orchestra, all in honor of Wayne and his work.

New Faculty

Tom Mason



Dr. Thomas G. Mason has recently joined the chemistry and biochemistry faculty as an assistant professor in July, 2003. He holds the John McTague Career Development Chair and has a joint appointment in the department of physics and astronomy. Prior to coming to UCLA, Tom worked as an industrial scientist in the field of complex fluids for nearly six years at ExxonMobil Research and Engineering Co. in Annandale, New Jersey. There, he developed polarized laser tweezers that can be used to trap and rotate birefringent microscopic particles suspended in a liquid, and, using

titigated the structure and interactions of heavy polyaromatic molecules known as asphaltenes that pose problems in refining crude oils. His postdoctoral experience includes interdisciplinary research in chemical engineering at the Johns Hopkins University, where he studied the mechanical properties of biopolymer solutions, and in physical chemistry at the Paul Pascal Research Center in Bordeaux, France, where he studied emulsification.

Tom's primary research interests lie in developing a fundamental understanding of the structure and mechanical flow properties, or "rheology", of soft materials including dense particulate suspensions, highly concentrated emulsions, and entangled polymer solutions. The shapes of and interactions between the microscale and nanoscale structures of the constituent particles, droplets, and polymers can profoundly influence the macroscopic phase behavior and rheology of these suspensions. His research group at UCLA will be exploring the following areas: (1) designing and studying the phase behavior of new kinds of colloidal particles using optical and e-beam lithographic methods, (2) creating nanoemulsions of liquid droplets that have zeptoliter volumes in another immiscible liquid for applications in coatings and drug delivery, (3) measuring the mechanical flow properties of very small volumes, or microrheology, of biopolymer solutions using particle tracking, laser tweezers, and light scattering, and (4) performing neutron scattering experiments at national beamline facilities in order to measure the structures of hydrocarbons in bulk suspensions.

Tom's laboratory space has just been completely renovated, and his group is in the process of setting up emulsification, rheology, light scattering, laser tweezers, and lithography experiments.

More information about Tom's research program is available on his website: <http://www.chem.ucla.edu/dept/Faculty/Mason/>.

ALUMNI NEWS

Fred T. Weiss, BS'38 (Young), PhD'41 (Harvard), is still active in the Judah L. Magnus Museum of Jewish Studies in Berkeley, which recently purchased a new building and will rebuild it with more extensive galleries. He writes that it takes "a different sort of chemistry to get many people involved."

Arthur Furst, MA'40 (Stone), PhD'48 (Stanford), is still active at age 88. He recently published two papers in the *International Journal of Toxicology* and *Food and Chemical Toxicology*. His book "151 Myths in Everyday Science" has just been published.

Stanley Singer, BS'46, PhD'50 (Jacobs), is director of research at Athenex Research in Pasadena.

Ross I. Wagner, BS'47, PhD'54 (USC) is, since July 2000, a research associate in the Loker Hydrocarbon Research Institute at USC.

Ursula (Solnitz) Osborne, BS'48, writes that her BS allowed her to work as a lab assistant in university labs at Berkeley, Wisconsin, Indiana, and Heidelberg, Germany. Despite her advisor's attempt to discourage her from majoring in chemistry ("Women choose to study chemistry merely to find a chemist husband."), she believes that her motive "was a deep yearning to learn of the beauty and intricacies of nature at a molecular level". She did find a chemist husband, **Clyde E. Osborne**, BS'48, and their marriage lasted 46 years until his death in 1994. Her career included teaching high school chemistry in California from 1965 to 1969, and two years (1996-98) as a Peace Corps volunteer in the highlands of Papua New Guinea. She writes that her twelfth-grade students there were extremely self-motivated, and that "I believe that the rigor in setting up expressions for calculations using units of measure, balancing oxidation-reduction equations, and reasonable attention to significant figures, as I learned at UCLA, was helpful to these third-world students".

S. Kathleen Tendick, BS'50, MS'52 (Crowell), retired from Los Angeles Harbor College in June 2002. She writes that she "missed last year's Seaborg Dinner because we were in southeast Asia, returning to Nepal from Thailand", but expects to attend the dinner in December.

Robert V. St. Louis, BS'54, PhD'63 (Minnesota), is emeritus professor of chemistry at the University of Wisconsin - Eau Claire, having served there from 1968 to 1998. He has been active in the Central Wisconsin Section of the ACS, serving as newsletter editor, chair, and National Chemistry Week organizer.

Noriko (Chiwaki) Clement, MS'55 (James), widow of **Robert A. Clement**, PhD'54 (Young), is doing Japanese translation and interpretation, as a business entity, Clemenor, LLC.

Cornelius Steelink, PhD'56 (Geissman), emeritus professor of chemistry at the University of Arizona, is president-elect of the Southern Arizona Section of the ACS, president of the University of Arizona Retirees Association, and president of the Southern Arizona Chapter of the Arizona Civil Liberties Union. He writes that "All of this keeps me busy and in constant trouble."

Carleton D. Bingham, PhD'59 (James), has been retired since 1995 from the AED/ERDA/DOE New Brunswick Laboratory, of which he was director from 1971 to 1995.

James A. Pegolotti, PhD'59 (Young), is retired from being librarian at West Connecticut State University in Danbury. He is author of "Deems Taylor: A Biography" to be published in the fall of 2003 by Northeastern University Press.

Matthew L. Howard, BS'60, MD'64, JD'93 (UC Berkeley), practices medicine part-time as a staff physician in the department of head and neck surgery at Kaiser Permanente Medical Group in

practice in Ukiah and Santa Rosa specializing in Social Security Disability law. He writes: "Following graduation and in medical school, I worked as a bench chemist for faculty on research projects, but have done nothing similar since finishing medical school. Indeed my next-to-last such job was as a student technician in Willard Libby's lab until he fired me for going to medical school instead of graduate school."

Bruce Rickborn, PhD'60 (Cram), is emeritus professor of chemistry at UC Santa Barbara, having retired in 2001.

Edwin C. Friedrich, PhD'61 (Winstein) is emeritus professor of chemistry at UC Davis.

Eugene N. Garcia, PhD'61 (McKee), is emeritus professor of chemistry at CSU Dominguez Hills.

David E. Whittington, BS'63, JD'66 (Hastings), practiced law from 1966 to 1996, but now is on inactive status. His last position was county counsel of El Dorado County, California. He writes that "Since 1971 I have also owned and operated a small farm where I now grow wine grapes." He also serves on the board of directors of the Georgetown Divide Public Utilities District.

C. Dale Poulter, postdoc '68 (Winstein), professor at the University of Utah, has been named winner of the James Flack Norris Award in Physical Organic Chemistry sponsored by the ACS Northeastern Section. He will receive the award at the March 2004 meeting of the ACS.

Michael H. Sekera, BS'69, MS'82 (CalTech) writes that "I have recently returned to Southern California after having spent the last six years in Kona, Hawaii, and the 2 years prior in the San Francisco Bay area. In the winter of 2002, I had the very satisfying opportunity of being part of the drug-testing program at the Salt Lake Olympics. I have now rejoined the UCLA Olympic Analytical Laboratory on a full-time basis as Scientific Director. This laboratory is the only one in the U.S. accredited by the International Olympic Committee to perform testing of athletes for performance-enhancing drugs such as anabolic steroids."

Alumni News Continued on Page 8

Chemistry and Biochemistry **UCLA**

NEW DEGREES CONFERRED

Ph.D.s 2003

Brian Baker	"Adhesion, Cohesion, and Secondary Structure of Mussel Adhesive Protein and Related Biopolymers in Solution and Thin Films" (Robin Garrell)
Erik Barthel	"Charge-Transfer-To-Solvent Reactions of Sodide in Tetrahydrofuran Investigated by Ultrafast Pump Probed Spectroscopy" (Benjamin J. Schwartz)
Kirsten Beverly	"Charge Transport in Low-Dimensional Solids and Single Molecule Systems" (James Heath)
Theresa Chang	"Mechanically Interlocked Molecules Beyond Catenanes and Rotaxanes" (J. Fraser Stoddart)
Hung Dang	"Structural Design, X-ray Characterization, and Photochemical Investigation of Organic Molecules in Ordered Media: Organic Molecular Rotors and Reactive Intermediates in Crystals" (Miguel A. Garcia-Garibay)
Hieu Duong	"Synthetic Strategies and Building Blocks for the Assembly of Heteroacenes, Polyacenes and Twistacenes" (Fred Wudl)
Yunfeng Hu	"Theoretical Investigation of Biological Catalysis by Antibodies" (Kendall N. Houk)
Kristopher Irizarry	"Bioinformatics Detection and Analysis of Single Nucleotide Polymorphisms in the Coding Regions of the Human Genome" (Christopher Lee)
Rebecca Janes	"Controlling Thermodynamics in the Synthesis of AlN and Surface Area in TiN Using Solid State Metathesis Reactions" (Richard B. Kaner)
Jonathan Katz	"Discovery and Characterization of Novel Methyltransferase Reactions and Pathways for the Amelioration of Molecular Aging in Microorganisms" (Steven G. Clarke)
Catherine McKinstry	"Arginine Sensing and Coordinated Feedback Inhibition of Acetylglutamate Synthase and Acetylglutamate Kinase In Neurospora Crassa " (Richard L. Weiss)
Gregory Mitchell	"Isofluorindine: The Keystone of Some Novel Materials" (Fred Wudl)
Danny Ng	"Photochemical Decarbonylation Reactions of Ketones in the Solid State and Applications to the Stereoselective Synthesis of Vicinal Quaternary Centers in Natural Products" (Miguel A. Garcia-Garibay)
William Nguyen	"Synthetic Approaches Towards Piperazinomycin and K-13. Formal Total Synthesis of LLU-a" (Michael Jung)
Andrew Norris	"Understanding the Mechanism of the Enzyme" (T. Toyokuni/C. Clarke)
Grazyna Orzechowska	"Atmospheric Chemistry of Ozone Reactions With Alkenes" (S. Paulson/D. (Baugh)
Fusayo Saeki	"Self-Assembled Monolayers And Thin Films: Structure, Interfacial Interactions and Electro-wetting" (Robin Garrell)
Elva Torres	"Coherent Dynamics via Polarized Parent/Product Photofragmentation Spectroscopy: Experiment and Theory" (Delroy Baugh)
Alon Volner	"Bacterial Phenylalanine Hydroxylase: Cloning, Preparation, Structural Features, Steady-State Mechanism, and Preliminary Investigation of Active-Site Residues" (Mahdi Abu-Omar)
Zhe Yang	"Photodecarbonylation of Crystalline Ketones and Its Application to the Synthesis of Tochuinyl Acetate" (Miguel Garcia-Garibay)

M.S.'s 2003

Michael Allen	Thomas Miller
Carlos Arcos	Robert Nascimento
Diana Davis	Julie Orf
Mary Doud	Jennifer Padilla
Regina Easley	Michael Page
Martha Ellison	Marie Parkes
Jie Lan	Gloria Rodriguez
Lee McPherson	Sadaf Sehati

B.S.s 2003

Ernest Agadzhanov
Chibuikem Akamnonu
David Akopian
Abraham Alejandro
Michael Allen
Courtney Amor
Nadya Andini
Johanna Ang
Francis Baltasar
Sahar Bedrood
Elaine Villanueva Bernal
Kinnar Bhavsar
Ke Kurt Bi
Craig Blois
Paul Celestre
Pamela Chao
Pui Shan Chau
Catherine Shih-Fang Chen
Crystal So-Pin Chen
I-Shan Chiang
Christine Chien
Jiah-Hung Chih
Collins Chijioke
Vivian Chiu
Mariae So Yung Choi
Carol Jacquelyn Chow
Maria Chuang
Philip Chuang
Alena Chung
Allison Collen
Charisse Crenshaw
Adelaine De Vera
Darla Draper
Sandra Enfiedjian
Russell Feller
Thomas Flaherty
Saori Furukawa
Frank Garcia
Rachel Rose Garcia
Stephen Gardner
Kimberly Gordy
Michael Hu
Katie So-Lai Hui
Adam Hunter
Bich Nhi Thi Huynh
Miguel A. Jimenez
Richard Julius
Evis Kamrava
Wei-Hsin Kao
Jaspreet Kaur
Kelly Kawaoka
Mahmood Khaledy
Jee Hee Kim
Yoonhan Kim

Jeff Kirchner
Takeyoshi Kondo
Nadia Kostritskaya
Milka Koupenova
Richard Kruszewski
Scott Kubomoto
Woo Jin Kwak
Benjamin Joseph Lim Lacar
Kate Yuenshun Lam
Doo-Sang Lee
Mimi Young Lee
Woo Yun Lee
Emerson Lego
Song Lieu
Than Saung Lin
Jack Liu
Melissa Lorang
Yen Luong
Thuy Thanh Luu
Yoon-Mi Lee Matracia
Keric Menes
Ravi Menghani
Alexander Morf
Dan Muhtar
Benny Chun Hei Ng
Vi Ngo
Vincent Nguyen
Farrah Noorbakhsh
Fausto Ortiz
Rajay Pandit
Bojun Park
Huyen Cecile Phan
Jelena Popovic
Mochtar Pribadi
Alexander Red Eagle
Andrew Ren
Jessica Lizett Reyes
Nichole A. Reyes
Sean Roberts
Rosemary Rohde
Maria Louisa Sabarsky
Syed Ferhaan Saquib
Karin Sardarian
Annie Yuchen Shen
Noel Sint
Lisa Smith
Morleh So-Kargbo
Tolulope Sonuyi
Brandee Lynn Spencer-Michl
Brian Stalker
Marc Starks
Jennifer Steller
Marc Stephenson
Susan Sun
Mitra Tabidian
Winnie Tai

Heather Tienson
Karrie Tomiska
Pei-Ling Tong
Thuy Tran
Kim Trinh
Rose Trinh
Tim Trinh
Amy Tse
Jeffrey Tseng
Yen Tseng
Alfonso Ricardo Urdaneta
Kim Vanguilder
Mania Vartanian
Lonnie Vaughn
Blanca Velez

Yow-Ning Wan
Charles Wang
George Chu-Kai Wang
SusAnn Winbush
Dennis Wong
Dixon Wong
Jason Wong
Lewis Wong
Teresa Woo
Tae Yang
Johnathan Chun Yeh
Jimmy Yip
Sylvia Youn
Shirley Zhao

SUMMER GRADS

Michael Aldridge	Wai-Yin Na
Christopher Amantea	Sarah Ng
Ani Baroni	Nam Nguyen
Huynh Cao	Tuong Van Nguyen
Alejandro Centeno	Brittany O'Dale
Kin Chan	Mitchell Ong
Tammy Lujing Chen	Tevan Ovsepyan
Peter Choi	Sara Panahandeh
Fiona Chow	Jennie Phu
Jae Hwan Chung	Ali Rashidian
Kimberly Clark	Shadi Rezai
Quochiep Dao	Sepideh Samzadeh
Marrisa Gittisarn	Soonyong Shim
Shoulamit Golfeiz	James Shinn
Michael Hu	Bryan Son
Sung Jung Hong	Kenneth Tam
Anderson Ip	Linda Tran
Rebecca Jones	My-Linh Truong
Francisca Kartono	Sheila Wan
Jeanne Kim	George Wang
Michelle Kim	Ya-Ju Wu
Joseph Mark Lat	Isaac Yoshii
Van Le	Jesse Ray Zamudio
Cheng Hsien Lee	Wei Zeng
Sharon Lim	Malachi Zubiate
Jose A. Lozano, Jr.	
Mary Ma	

Commencement, UCLA, 2003

Launching Lives

Chemistry and Biochemistry Commencement Ceremony

By Amy Portello

At the Chemistry and Biochemistry Ceremony on June 14, the sun shone brightly on the 170 Bachelor's of Science and 30 PhD graduates in black robes. Faculty, staff, and approximately 1,700 guests watched with delight as the Department recognized the students' completion of their degrees. Due to the generous donations of alumni and friends of the Department, 72 honors and \$28,000 in monetary awards and fellowships were also presented to designated students. The afternoon ended with caps flying, graduates hugging, and smiles from everyone celebrating the success of the Class of 2003.

Commencement 2003, Awards **Graduate Awards**

Saul Winstein Award Presented by Sylvia Winstein to Clifton Shen

Physical Chemistry Award Presented by Professor Benjamin Schwartz to Erik Barthel

Biochemistry Award Presented by Professors Todd Yeates and Sabeeha Merchant to Jennifer Padilla and Danielle Leuenberger

Inorganic Chemistry Award Presented by Professor Richard Kaner to Rebecca Janes

Thomas L and Ruth Jacobs Award Presented by Mrs. Ruth Jacobs and Mrs Antoinette Kayser to Alexandra van den Heuvel

Undergraduate Student Awards

Alumni Undergraduate Summer Research fellowships Presented by Dr Robert Boschan to Tal Danino

Ronald S Gabriel MD/Scrubs Unlimited Summer Research Fellowship Presented by Professor Richard Kaner to Michelle Lee

Yoshie Kadota Undergraduate Award Presented by Ms Ruthi Kadota and Ms Akiko Woods to Carrie Brubaker

Arthur Furst Award for Excellence in Undergraduate Research Presented by Professor Sarah Tolbert to Van Le



Race to the Finish

Dolores Cannon Southam Award for Excellence in Research Presented by Mr Hillel Fierer to Michael Allen & Francisca Kartono

Dunn Award for Excellence Presented by Professor Emil Reisler to Courtney Amor, Charisse Crenshaw, Stephen Gardner & Alexander Red Eagle

Geissman Award for Excellence in Organic Chemistry Presented by Professor Heather Maynard to Kimberly Gordy

Ramsey Award for Excellence in Physical Chemistry Presented by Professor Benjamin Schwartz to Paul Celestre, Benny Chun Hei Ng & Sean Roberts

Ralph Bauer Award for Excellence in Inorganic Chemistry Presented by Professor Mahdi Abu-Omar to Russell Feller

Ethel terry McCoy Award for Excellence in Chemistry and Biochemistry Presented by Professor Sabeeha Merchant to Vi Ngo, Maria Sabarsky, Karin Sardarian, Karrie Tomiska & Pei-Ling Tong

Merck Index Award Presented by Dr Margie Bates to David Akopian, Maria Chuang, Philip Chuang, Nam Nguyen, Mochtar Priyadi & Syed Ferhaan Saquib

Hypercube Scholar Presented by Professor Fred Hawthorne to David Akopian

Gold Family Foundation Award Presented by Professor Sarah Tolbert to Britnee Veldman



Getting Ready



Waiting Their Turn

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Nina and William Gelbart*
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and Pamela Davis Kivelson*
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Ralph and Shirley Shapiro*

To all donors: If in the future we leave out your name from the acknowledgements list, please let us know!

GOLD

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Rosa Silva*
Charles and Francine Sloane*
Jean Wollan*

Alumni News Continued

Melvin Hoshiko, BS'69 (Jacobs), MD'73 (UC Irvine), is medical director of the department of pathology at Long Beach Memorial Medical Center.

Joanne Seltzer, AB'71, MD'75, is assistant clinical professor in the UCLA School of Medicine and training and supervising analyst at the Southern California Psychoanalytic Institute.

Gary B. Quistad, PhD'72 (Lightner), is a research toxicologist in the Department of Environmental Science, Policy, and Management at UC Berkeley. He has worked on mechanisms of pesticide action and toxicity for the last 11 years.

Wendy S. Hallett, BS'72, is the manager of Laboratory Operations at the Mt. Diablo campus of the John Muir – Mount Diablo Health system. She writes that "This role includes being the laboratory information system coordinator. The funny piece is that she transferred from a degree in mathematics to avoid a career in computer programming.

William R. Roush, BS'74, PhD'74 (Harvard), now at the university of Michigan, has been named winner of the Ernest Guenther Award in the Chemistry of Natural Products, sponsored by Givaudan. He will receive the award at the March 2004 meeting of the ACS.

Richard W. Bild, PhD'76 (Wasson) is Project Manager Technical Services at Sandia National Laboratory in Albuquerque, New Mexico. He is married to **Karen L. Robinson**, BS'73.

George P. Teitelbaum, BS'76, MD'80 (UC San Diego), is professor of neurological surgery at the USC/Keck School of Medicine. He is also founder of the Vertelink Corporation in Irvine, California.

Mark A. Minton, PhD'77 (L. Scott), is a post-doc and chemical safety officer in the department of natural sciences at New Mexico Highlands University in Las Vegas, New Mexico.

William J. Scanlon, PhD'77 (Eisenberg), JD'78 (Wisconsin), has his own law office, The Scanlon Law Office, in Madison, Wisconsin.

Gary R. Weisman, postdoc'77 (Cram), is professor of chemistry at the University of New Hampshire in Durham. His research emphasizes stereochemistry and conformational analysis, and the chemistry of amines, polyamines, and derivatives. He is vice-chair of the 2003 Gordon Research Conference on Physical Organic Chemistry.

Catherine Ann Asaro, BS'78 (Heller), is currently president of the Science Fiction and Fantasy Writers of America. Her book "The Quantum Rose" has won the Nebula Award.

Steven A. Boyd, PhD'84 (Thompson), is currently a director of medicinal chemistry with ArrayBioPharma, Inc., a drug discovery company in Boulder and Longmont, Colorado. He was previously with Abbott Laboratories for 13 years.

Robert J. McMahon, PhD'85 (Chapman), is professor of chemistry at the University of Wisconsin, Madison.

Earl D. Murray, Jr., PhD'85 (S. Clarke), is associate director of development operations at Encore Pharmaceuticals, Inc. in Riverside.

Andrew D. Fortney, BS'85 (Hersh), PhD'90 (Princeton), JD'95 (George Washington), began a career in patent law in Virginia. In 1996, he joined Cypress Semiconductor Corporation in San Jose, as Senior Corporate Counsel and Director of Intellectual Property. He "retired" from Cypress in 2002 and moved to Fresno, where he has a small law practice.

Robert L. Buchanan, PhD'88 (Gralla), is now a partner in the Edwards & Angell, LLP law firm in Boston. He has a JD from Suffolk University Law School and his practice involves obtaining and protecting intellectual property rights for a variety of research institutions and life science companies in the U.S. and abroad.

Lenore M. Martin, PhD'89 (Chapman), was promoted in 2002 to associate professor (with tenure) in the department of cell and molecular biology at the University of Rhode Island. She writes that she has written a biochemistry text in 2002 and chaired an ACS symposium on antimicrobial peptides in June 2003.

Susan A. Kamper (MS'89 (El Sayed), MD'96 (Illinois)), is an internist with St. Luke's Internal Medicine Associates in Duluth, Minnesota.

Daniel J. O'Leary, PhD'91 (Anet), is associate professor of chemistry at Pomona College. His wife, **June Fu O'Leary**, MS'91 (S. Clarke) is a research associate at the Rand Corporation in Santa Monica.

Charles W. Sokolik, PhD'91 (Cohen) is associate professor and chair in the department of chemistry at Denison University in Granville, Ohio.

Yu-Shen Chen, BS'91 (Kivelson), PhD'96 (Chicago), is staff scientist at Lumileds Lighting in San Jose, California.

Scott K. Silverman, BS'91 (Foote), PhD'97 (CalTech), is assistant professor of chemistry at the University of Illinois, Urbana-Champaign.

Bennet So, BS'91, MD'96 (Chicago), practices medicine in Laurel, Maryland.

Christopher M. Hicks, BS'92 (Diederich), MD'96 (UC San Francisco), is a full-time clinician as assistant chief in the department of internal medicine with the Kaiser Permanente Medical Group in Denver, Colorado.

Wai-Hong H. Song, BS'92 (Trueblood), MA'96 (CSU Dominguez Hills), is a police supervisor (detective sergeant) in the Los Angeles Police Department.

Tam L. Nguyen, BS'93 (Strouse), PhD'98 (SUNY Stony Brook), is a computational chemist at the National Cancer Institute in Frederick, Maryland.

Robert D. Williams, BS'93 (Strouse), PhD'98 (Northwestern), is senior research scientist in analytical research and development at Pfizer Global Research and Development in Groton, Connecticut.

Jamey Anderson, PhD'96 (Foote), chemistry professor at Santa Monica College, has been named the recipient of the Marvin Elkin/Northrop Grumman Chair of Excellence. He will receive \$5,000 a year for each of the next three years to be used for projects of his choice that will enhance his teaching. He plans to use the funds for upgrading the college's Nuclear Magnetic Resonance Laboratory.

John D. Tovar, BS'97 (Rubin), PhD'02 (MIT), is a postdoctoral fellow in materials science and engineering at Northwestern, working with S. Stupp.

Michelle W. Wu, BS'98, OD'02 (UC Berkeley), is now an optometrist in Arcadia, California.

Kristi Stepien Wees, MS'99 (Kaner), is sales manager for Kelly Scientific Resources in Houston, Texas.

Angela M. Boutté, BS'00, is a graduate student in neuroscience at the Center for Molecular Neuroscience at Vanderbilt University and the department of pathology at the University of Washington.

In Memoriam

William J. Arnold, BS'47, died 3 February 2003. A native of Los Angeles, he served in the Army Air Force during World War II. He became a chemist for the state of California and retired as a special agent.

Linda Sweeting, BS' 64 (Toronto) PhD'69 (Anet), Professor of Chemistry at Towson University, died suddenly 28 September, 2003. Her research interests in the chemistry of organic materials and spectroscopy led her to examine triboluminescence. She also wrote and spoke widely in the field of professional ethics for scientists.

Kate Blacet, widow of Francis E. Blacet, former Chair and Professor of Physical Chemistry, died 17 July 2003, a few days after her 103rd birthday.

2003 Seaborg Symposium and Dinner

“Magnetic Resonance in Chemistry, Biology and Medicine”

honoring Ad Bax and Alex Pines.

Glenn T. Seaborg 2003 Medal Winners

Ad Bax



Adriaan (Ad) Bax was born in 1956, in The Netherlands and became a US citizen in 1999. He received his Ph.D. in 1981 from the Delft University of Technology, The Netherlands, for work related to the development of two-dimensional nuclear magnetic resonance (NMR) techniques, which he carried out at Delft and Oxford Universities. His Ph.D. thesis was reprinted in book format and for many years served as a popular text, introducing students to the application of two-dimensional NMR in chemistry. After post-doctoral work in solid-state NMR, Bax joined NIH where he has been working on the development and application of a wide variety of advanced multi-dimensional NMR techniques. Initially, this work focused on the study of natural products and other small molecules, but in the latter half of the eighties he shifted his interests to the study of the three-dimensional structure and dynamic properties of proteins.

Bax's work has been recognized by numerous awards, including the Maryland Outstanding Young Scientist Award from the Maryland Academy of Sciences, the Gold Medal from the Dutch Chemical Society, the Bijvoet Medal from Utrecht University, the Protein Society Young Investigator Award, the E. Bright Wilson, Hillebrand, and Remsen Awards from the American Chemical Society, the Kirkwood Medal from Yale University, the Gunther Laukien Award from the Experimental NMR Conference, the John Scott Award from the City of Philadelphia, the Jeanette Piperno Award from Temple University, and the Hans Neurath Award from the Protein Society. He is also a corresponding member of the Dutch Royal Academy of Sciences, a Fellow of the American Academy of Arts and Sciences, and a Member of the National Academy of Sciences.

Alex Pines



Alexander Pines is the Glenn T. Seaborg Professor of Chemistry at the University of California, Berkeley, and Principal Investigator in the Materials Sciences Division of the Lawrence Berkeley National Laboratory. In 1972, he obtained his Ph.D. in Chemical Physics at MIT and joined the faculty at Berkeley. Pines was awarded the Wolf Prize for chemistry in 1991. Among his numerous other honors, he has received the Langmuir Award of the American Chemical Society and the Faraday Medal of the Royal Society of Chemistry. He is a member of the U.S. National Academy of Sciences, and a Foreign Member of the Royal Society (London); he is Doctor Honoris Causa at the University of Paris and the University of Rome, and past President of the International Society of Magnetic Resonance. A renowned educator, Pines has been recognized by receiving the University of California Distinguished Teaching Award; and has been mentor to generations of graduate students and postdoctoral fellows worldwide, the self-dubbed “Pinenuts”.

Pines is a pioneer in the development of nuclear magnetic resonance (NMR) spectroscopy, particularly for solids. His innovations include contributions to multiple-pulse coherent averaging, time-reversal of dipolar couplings, cross-polarizations, multiple quantum coherence, multidimensional spectroscopy, and zero-field NMR. Applications of his widely used techniques range from catalyst and polymers to liquid crystals and biomolecules. Recently, Pines has introduced a novel approach to high-resolution “*ex-situ*” spectroscopy and imaging; he has also further enhanced NMR and its offspring, magnetic resonance imaging (MRI), using laser-polarized noble gases and superconducting (SQUID) detectors, with applications extending from chemistry and physics to materials science and biomedicine.



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Reservation Form - Seaborg Symposium and Dinner

Number of Attendees _____

Symposium (No Charge) _____ Medal Dinner (\$60 per person) _____ Dinner Tables of Eight (\$450) _____

Student Dinner Support (\$50) (*Student dinner support is fully tax deductible)

I/We am/are unable to attend, but enclosed is a contribution of \$ _____ to help support the work of the UCLA Department of Chemistry and Biochemistry. Total amount enclosed: _____

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Chemistry and Biochemistry **UCLA**

The UCLA Department of Chemistry and Biochemistry
is proud to announce that

Dr. Ad Bax & **Professor Alex Pines**

National Institutes of Health
will receive the

University of California, Berkeley

2003 Glenn T. Seaborg Medal

on **Saturday, December 6, 2003** at the dinner following the Seaborg Symposium.

“Magnetic Resonance in Chemistry, Biology and Medicine”

Paul D. Boyer Hall, Room 159

9:30 a.m. - 12:10 p.m.

Alex Pines, University of California, Berkeley.

“Thirty Years of Ups and Downs”

Peter van Zijl, Johns Hopkins University.

“Exploiting the NMR Signals of Mobile Proteins &
Peptides for MRI”

Ann McDermott, Columbia University.

“NMR Studies of Intrinsic Membrane Proteins”

2:00 p.m. - 5:20 p.m.

Ad Bax, National Institutes of Health.

“A New View of Protein Structure by Weak Alignment
NMR”

Lewis Kay, University of Toronto.

“NMR Approaches for the Study of Protein Structure &
Dynamics”

Dorothee Kern, Brandeis University.

“Enzymes in Action in the NMR Tube: Protein Dynamics
During Catalysis”

Gerhard Wagner, Harvard Medical School.

“NMR Approaches for Studying Proteins Involved in Gene
Expression”

Reception at 6:30 p.m. - UCLA Covell Commons, Grand Horizon Room

Dinner at 7:30 p.m. - UCLA Covell Commons, Grand Horizon Room

Further information and reservation forms will be sent in October. Go to <http://www.chem.ucla.edu/> for additional details.

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