



## 6 Alumni Updates

The Department would love to hear what you are doing now! Have you changed jobs? Married? Moved? Climbed Mt. Everest? Let the Chemistry Department know what you are doing and what changes have occurred since you graduated. Please send an e-mail with your updated information to [chemistry@utk.edu](mailto:chemistry@utk.edu).

**Britni Ratliff** (B.S. 2006) entered the Ph.D. program at the University of Chicago in the Fall of 2006.

**Lee Brogan** (B.S. 2006) entered the Ph.D. program at the University of California at Berkeley in the Fall of 2006.

**Robert Sacci** (B.S. 2006) has entered the Ph.D. program at the University of Victoria in British Columbia, Canada.

**Eugene DePrince** (B.S. 2005) is pursuing a Ph.D. degree with David Mazziotti at the University of Chicago.

**Dr. Tim Lillestolen** (Ph.D. 2005) is now pursuing postdoctoral research with Richard Wheatley in the Department of Chemistry at the University of Nottingham.

**Dr. James Mancillas** (Ph.D. 2005) is employed at the Southwest Research Institute in San Antonio, TX working on simulations of the transport of groundwater near Yucca Mountain.

**Dr. Lee Warren** (Ph.D. 2005) is currently pursuing postdoctoral research at Oak Ridge National Laboratory with Robert Harrison.

**Brandy (Underwood) Belue** (M.S. 2005) is now employed as a Principal Chemist in the Analytical Division of research and product development at Cott Beverages in Columbia, GA.

**Kristy (Pickett) Homberger** (M.S. 2006) is currently teaching science, ecology and chemistry at Doris A. Walker Academy in Knoxville, TN.

**Dr. Paul Davis** (B.S. 1995) is currently an Assistant Professor of Chemistry at Pacific Lutheran University in Tacoma, Washington.

**Dr. Brandon Farmer** (Ph.D. 2006) has taken a position with SRS Technologies in Huntsville, AL as a Polymer Scientist.

**Dr. Andy Fisher** (Ph.D. 2006) has taken a postdoctoral position at Oak Ridge National Laboratory.

**Dr. David Rodman** (Ph.D. 2005) is employed with Vintage Pharmaceuticals in Huntsville, AL.

**Dr. Kathleen Giesfeldt** (Ph.D. 2005) is employed with Exxon located in Baton Rouge, LA.

**Dr. Nicie (Conley) Murphy** (Ph.D. 2005) is currently employed with Siemens Medical located in Oak Ridge, TN.

**Jamie Molaison** (M.S. 2006) is employed in the Experimental Facilities Division of the Spallation Neutron Source at Oak Ridge National Laboratory.

**Dr. Laurie Morton** (Ph.D. 2005) is now pursuing postdoctoral work at Villanova University in Pennsylvania.

**Dr. Steve Wargacki** (Ph.D. 2005) is currently at a postdoctoral position at Wright Patterson Air Force Base in Ohio.

**Dr. Scott Fontana** (Ph.D. 2005) is now employed with the Food and Drug Administration.

**Dr. Asif Rasheed** (Ph.D. 2006) has accepted a postdoctoral position at Georgia Institute of Technology in Atlanta, GA.

**Dr. Michael Arlen** (Ph.D. 2003) is currently at a postdoctoral position at Wright Patterson Air Force Base in Ohio.

**Dr. Charles Obrien** (Ph.D. 2004) is now employed with the Food and Drug Administration.

**Dr. Nathan Crawford** (Ph.D. 2005) is currently pursuing postdoctoral research at the University of Tennessee, Knoxville with Dr. Jamie Adcock.

**Dr. Pradeep Kumar** (Ph.D. 2004) is currently conducting postdoctoral research at Oak Ridge National Laboratory.

**Dr. Kevin Bennett** (Ph.D.) has been granted tenure and named Chair at Hood College in Frederick, MD.

**Dr. Benji Prebyl** (Ph.D. 2003) completed law school at Franklin Pierce Law Center and took the Bar exam this summer. Results of the Bar were pending at last contact.

**Dr. Shaolian Zhou** (Ph.D.) accepted a position from Thermo and will be stationed back in his home country of China, realizing a long-term goal.

**Dr. Cara Nygren** (Ph.D., 2005) is currently pursuing postdoctoral work at Brandeis University in the Petsko Group.

**Dr. Sylvia McClain** (Ph.D., 2004) is completing her Nation Science Foundation international postdoctoral fellowship at the ISIS spallation neutron source (UK) and will begin a joint postdoctoral position between the University of Oxford and ISIS upon completion.

**Michelle Dolgos** (M.S. 2005) is currently a Ph.D. candidate at The Ohio State University in the Woodward Group.

**We'd love to hear from you!**

Mn	Fe	Co	Ni	Cu	Zn	Al	Si	P	S
54.938	55.847	58.933	58.69	63.546	65.38	26.9815	28.0855	30.9738	32.06
43	44	45	46	47	48	49	50	51	52
Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te
98	101.07	101.07	106.36	107.868	112.411	114.818	118.710	121.757	127.6
25	26	27	28	29	30	31	32	33	34
Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po
186.207	190.23	192.22	195.08	196.967	200.59	204.38	207.2	208.98	209

## Chemistry Graduate Student chosen to attend 56th Annual Lindau Meeting

For over 50 years the Lindau Nobel Laureate Meetings have brought Nobel Laureates together with students and young researchers. This year, sponsored by Oak Ridge Associated Universities, Scott Borella attended the 18th Lindau Meeting in Chemistry June 25-30, 2006. Scott is a third year graduate student doing research in the Kabalka group.

The Lindau Meetings bring together graduate students and Nobel Laureates from around the world and offers them a forum to communicate about chemistry. Nobel Laureates such as Prof. Richard Schrock and Prof. Sir John Walker participate in plenary sessions, round table debates, small group discussions and informal social activities bringing them together with students.

Scott was the second graduate student from the Department of Chemistry to attend the Lindau meeting. In 2002, Maggie Connatser attended the 52nd Lindau Meeting.



**Prof. Richard Schrock answers questions during a round table discussion.**

For more information on this program please visit the Lindau Nobel Website at [www.lindau-nobel.de](http://www.lindau-nobel.de).

## Chemistry Majors Honored at Chancellor's Banquet



Senior Chemistry major Britni Ratliff was honored at the 2006 Chancellor's Banquet with the University of Tennessee's highest undergraduate honor - being named a Torchbearer. Torchbearers are seniors who have strived for excellence in academics, activities, service to the community, and contribution to the university. Britni, a chemistry major and math minor, was one of seven students honored with the rank of Torchbearer. Britni is now working on her doctorate in chemistry at the University of Chicago.

Undergraduate Chemistry major Lee Brogan also received an academic achievement award at the 2006 banquet. Lee is currently pursuing a Ph.D. in chemistry at the University of California at Berkeley.

## Recent Graduates

### 2006

(Spring & Summer Only)

Britni Ratliff - B.S.

Lee Brogan - B.S.

Robert Sacci - B.S.

Katherine Frederick - B.S.

Kathline Langston - B.S.

Lara Turner - B.S.

Allyson Warren - B.S.

Justin Marlow - B.S.

Kristy (Pickett) Homberger - M.S.

Christine Shook - B.S.

Kashif Saleem - B.S.

Ian Reinemeyer - B.S.

Asif Rasheed - Ph.D.

Andy Fisher - Ph.D.

Jamie Molaison - M.S.

Xiao Ma - M.S.

Michelle Dolgos - M.S.

Chunlan Chen - M.S.

### 2005

Latasha Garrett - B.S.

Mary Ross - B.S.

Timothy Stortz - B.S.

Leslie Adamczyk - B.S.

Eugene DePrince - B.S.

Courtney Neel - M.S.

Joshua Bailey - M.S.

Megan Bragg - Ph.D.

Jason Clark - Ph.D.

Joey Dickson - Ph.D.

Scott Fontana - Ph.D.

Timothy Lillestolen - Ph.D.

James Mancillas - Ph.D.

Nicie (Conley) Murphy - Ph.D.

David Rodman - Ph.D.

Steve Wargacki - Ph.D.

Gary (Lee) Warren - Ph.D.

Xiang Yu - Ph.D.

Gang Dong - Ph.D.

Kathleen Giesfeldt - Ph.D.

Nathan Crawford - Ph.D.

Laurel Morton - Ph.D.

Chengdu Liang - Ph.D.

Joseph Burlison - Ph.D.

Scott Fontana - Ph.D.

Megan Bragg - Ph.D.

Jason Clark - Ph.D.

Cara Nygren - Ph.D.

Brandy Belue - M.S.

### 2004

Emily Blackwell - B.S.

Michael Bleakley - B.S.

Douglas Davis - B.S.

Daniel Fowler - B.S.

Jim Patton - M.S.

Sylvia McClain - Ph.D.

Conrad Kaczmarek - M.S.

Phil Stimac - Ph.D.

Charles Obrien - Ph.D.

Pradeep Kumar - Ph.D.

Marco DeJesus - Ph.D.

Angela Whisnant - M.S.

Adam Mullenix - Ph.D.





## Research Funding

External support for research and education surpasses \$5 million over the 2006 fiscal year. Listed below are new or renewed awards of \$35,000 or more over the period from July 2004 through August 2006.

### J.L. Adcock

*Computational and Experimental Study of High Performance Lubricants in Extreme Environments*; USAF; \$195,158; 5/05-5/08

### D.C. Baker

*Chemical Synthesis*; Gryphus Diagnostics; \$98,341; 11/03-9/05

### C.E. Barnes

*Nanostructured Metal Oxide Catalysts via Building Block Synthesis*; DOE; \$402,481; 11/04-10/07

*Novel Aluminosilicate Solid Acid Catalysts Via Building Block*; ACS; \$80,000; 4/05-3/07

### J.E. Bartmess

*Maintenance and Expansion of the Gas Phase Negative Ion Thermochemistry Database*; NIST; \$48,129; 7/04-6/06

### R.L. Compton

*Multipole-Bound Negative Ions*; NSF; \$391,810; 3/04-2/06

### K.D. Cook

*Hydrogen Exchange Studies on A-beta Amyloid Fibrils*; NIH; \$303,044; 9/01-8/06

### M.D. Dadmun

*Multiple Bound Polymer Chains: Novel Chemistry for Improved Interfacial Properties*; NSF; \$1,863,000; 7/05-6/07

### C.S. Feigerle

*Diamond Stripper Foil Research*; NSF; \$37,408; 10/05-9/06

### G.A. Guiochon

*Separation of Highly Complex Mixtures By Two-Dimensional Liquid Chromatography*; DOE; \$300,000; 7/04-7/07

*Homogeneity of Adsorbent Surface*; DOE; \$600,000; 3/88-7/07

*Fundamental Studies in Non-Linear Chromatography*; DOE; \$1.7m; 7/06-7/07

*Fundamental Studies in Non-Linear Chromatography*; NSF; \$479,985; 7/06-6/09

### A. Hazari

*Inquiry-Based Physical Science for Middle School Teachers*; THEC; \$74,983; 1/05-9/05

### R.J. Harrison

*Collaborative Research: CAS-AES: An integrated framework for compile-time/run-time support for multi-scale applications on high-end systems*; NSF; \$210,000, 8/05-8/07

### R.J. Hinde

*Spectroscopy and Dynamics in Molecular Quantum Solids*; NSF; \$382,665; 8/04-7/07

### G.W. Kabalka

*Boron in Nuclear Medicine: New Radiotracers for Targeting Mutated Raf Protein for the Early Detection of Lung Cancer*; DOE; \$766,065, 5/04-4/07

*New Boron and Metal Halide Mediate Propargylation and Allylation*; ACS; \$80,000; 9/04-8/06

### J.Z. Larese

*IMR-IMP: VISION-CED for a Neutron Vibrational Spectrometer for SNS*; NSF; \$1.5m; 7/04-6/07

### L. Magid, M. Dadmun

*Science and Technology Center: Integrative Partnerships "NETI: Neutron Education & Technology Institute"*; NSF; \$406,706; 7/05-7/06

### J.W. Mays

*New Sulfonated and Fluorinated Copolymers: Synthesis, Morphology and Properties*; University of Mass.; \$148,430; 6/04-5/07

*Self-Assembly of Polyelectrolyte Structures in Solution: From Atomic Interactions to Nanoscale Assemblies*; UT-Battelle; \$49,182; 7/06-12/06

*Materials World Network-Molecular Engineering of Polymers for Processing Performance and Properties*; Virginia Polytechnic Institute and State University; \$328,110; 5/06-4/09

*Neutron Reflectometry Studies of the Structure of Polyelectrolyte Thin Films Subject to Shear*; UT-Battelle; \$60,876; 12/04-9/06

*Molecular Design of Hyaluronan with Polypeptide Branches of Controlled Structure*; University of Utah;

V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr
43	44	45	46	47	48	49	50	51	52	53	54	55	56
Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe		
75	76	77	78	79	80	81	82	83	84	85	86		
Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn		
75	76	77	78	79	80	81	82	83	84	85	86		

**J.W. Mays (cont'd)**

*Poly(cyclohexadiene)-Based Polymer Electrolyte Membranes for Fuel Cell Applications*; DOE; \$1.2m; 4/06-3/11

**J.L. Musfeldt**

*Spectroscopic Studies of Complex Materials in High Magnetic Fields*; DOE; \$583,554; 6/01-7/09

*Single Magnetic Molecules - A Controlled Route to Nanomagnetism*; AMES; \$60,000, 10/02-9/06

*Low-Energy Optical Spectroscopy as a Probe of Structure/Property Relations in Organic Solids*; NSF, \$360,000; 5/06-5/08

**M.J. Sepaniak**

*Nanostructured Materials as Transducers in Micro-fluidic Platforms for Chemical Analysis*; DOE; \$95,000, 8/05-7/06

*Microcantilever Transducers: Next Generation of Gas Diagnostics*; BWXT; \$200,000; 11/04-10/06

*Nanostructured Fiber Optic Cantilever Arrays and Hybrid MEMS Sensors for Chemical and Biological Detection*; Luna; \$100,000; 1/06-12/07

**Z. Xue**

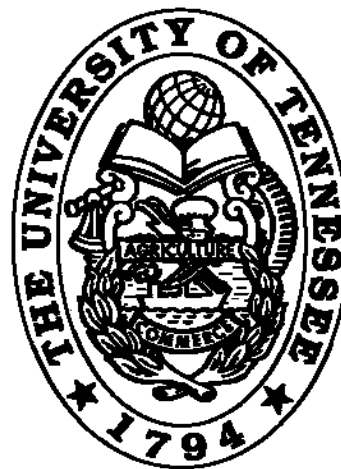
*Novel Method for Chromium Analysis in Biological Fluids*;

NIH; \$362,500; 4/04-3/06

*Probing Novel Reactivities of Transition Metal Complexes and Mechanistic Pathways in the Formation of Microelectric Materials*; NSF; \$270,000, 8/05-8/07

**B. Zhao**

*Doubly Thermosensitive Block and Star Copolymers form the Living Radical Polymerizations: Synthesis, Phase Transitions, and Application*; NSF; \$285,000; 6/06-5/07



## Dedicated Staff Strengthens Department

The staff of the Department are an integral part of making everyday a success and to continually work towards excellence in the University, Community, and the world of chemistry. We would like introduce you to just two of the most vital members of our staff.



Mrs. Eva Ortiz-Smith joined the Department in 2005 as a windswept victim of Hurricane Katrina. Since joining us she become the foundation of the front office as the new Office Supervisor. Prior to taking the position in the front office Eva was the know-all do-all faculty secretary.

Eva is the point of contact for any question you should have regarding the Chemistry Department. We invite all of you who have questions regarding the Department to contact Eva at [osmith@ion.chem.utk.edu](mailto:osmith@ion.chem.utk.edu) or call (865) 974-3141.



In this era of “compliance” within the University of Tennessee Ms. Sharon Marshall has taken the reins of the business office.

Sharon and her staff are responsible for all orders, shipping and receiving in the department as well as managing the one hundred or so proposals and grants that are active at any time in the department. Sharon, along with Melissa Walker and Jocelyn Miller have taken a cradle-to-grave philosophy in helping faculty prepare proposal budgets, manage the finances during a project and closing the account properly. As indicated above, understanding and complying with the rules of the university and the different funding agencies is the new era within which we live.



## 10 Outreach & Service

### Building a foundation for Chemistry

The Student Affiliates of the American Chemical Society (SAACS) and the Association of Chemistry Graduate Students (ACGS) are organizations with a long-standing presence in the Chemistry Department. Over the years these groups have taken on the responsibilities of educating the community about chemistry through programs offered year-round.

Each year members of the ACGS help to host Research Open Houses in the Spring, allowing potential students to visit the Chemistry Department and speak with faculty and students about the research that is conducted here and the graduate program in chemistry. ACGS members also assist in the annual Chemistry Camp during the Summer and help to supply first-year chemistry students with locks and goggles for a safe laboratory experience.

SAACS is the undergraduate student chemistry

organization and also continues to work to build its ranks. SAACS may be most notably known for its annual sale of organic chemistry model kits, but SAACS plays a large role in outreach to the community. SAACS works each Spring to provide area high school students the opportunity to visit the Chemistry Department and learn about the wonders and depth of Chemistry in everyday life. In addition, SAACS hosted a booth at the 2006 Homecoming festivities prior to the Homecoming football game.

Both the ACGS and SAACS attended the Math and Science Regional Center Exposition where the Department hosted a booth to educate regional high school and middle school students.

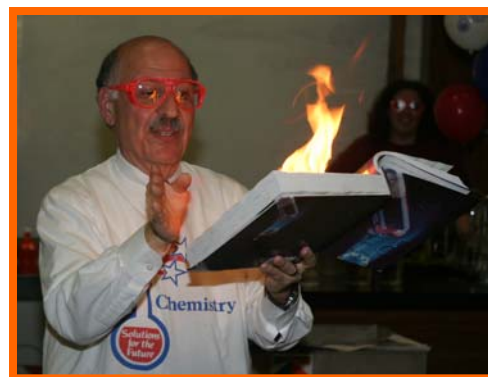
The Department would like to recognize the great work that these groups do each and every year!



Pictures (L to R): Prof. Al Hazari demonstrates the magic of chemistry to visiting area high school students whom SAACS hosts every Spring to introduce them to chemistry as a college major. SAACS member Febi Pangoli setting up a demonstration of chemistry at the SAACS booth at Homecoming 2006. Graduate Students speak with visiting potential students during one of the Research Open House poster sessions that occur every Spring.

**Al Hazari**, Director of the Undergraduate Chemistry Labs and Lecturer in Chemistry, has been very active with plans to upgrade the General Chemistry Lab program. A proposal for funds to equip the labs with two *MeasureNet* networks was successful. The 24-station system, installed in the Honors General Chemistry Lab over Summer 2006 will provide students with advanced measurement instrumentation and data-handling technology (see page 5 for more information).

Al still teaches two courses for non-science majors (*Chemistry & Society* and *Chemistry & the Home*), is involved with the East Tennessee Section of the American Chemical Society (ETS-ACS) that just celebrated its 75th anniversary, and does Chemistry Magic shows. As a faculty advisor to the Association of Chemistry Graduate Students (ACGS), he helps out with the fund-raising and the conducting of the annual summer chemistry camp for area middle school students, entitled *Adventures in Forensic Chemistry*. Last Summer, Hazari held two one-week workshops (*Inquiry-Based Physical Science for Middle School Teachers*) in Knoxville and in Memphis. The workshops were sponsored by the Tennessee Higher Education Commission with *No Child Left Behind* funds.



**Dr. Al Hazari displays the wonders of chemistry through his Chemistry Magic Shows.**