

CHEMMUNICATOR

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2007 Spring Semester

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Switzer wins ACS award

Dr. Jay A. Switzer, Donald L. Castleman Distinguished Professor of Chemistry at the University of Missouri-Rolla and a senior investigator in the UMR Materials Research Center, has won the 2006 American Chemical Society Midwest Award. The award was

presented at the ACS 2006 Midwest Regional Meeting in Quincy, Ill., in October.

Switzer's current research focuses on chiral electrochemical sensors, which could be useful to the pharmaceutical industry.

"Most important drugs on the market are chiral – they exist as either right-handed or left-handed molecules," Switzer explains. One "hand" of the molecule is effective as a drug, the other is ineffective at best and occasionally toxic. "The chiral surfaces we produce could be used as catalysts to produce the chiral pharmaceuticals or as sensors to measure their concentration, perhaps even as implantable sensors in the human body."

Other current projects include research into epitaxial electrodeposition of metal oxides, spintronics and electrochemical biomineralization.

Switzer pioneered the electrodeposition of nanostructured metal oxide semiconductors, magnetic materials and catalysts. He is best known for his research on the electrodeposition of ceramic superlattices, epitaxial films, and chiral catalysts. His research has been featured in the journals *Science* and *Nature*.

Switzer has served on the editorial board of *Chemistry of Materials* and is a principal editor of the *Journal of Materials Research*. He received the Electrodeposition Award from the Electrochemical Society in 2003. Recently, he chaired the 2006 Gordon Research Conference on Electrodeposition.

UPCOMING events

Open House.....	April 6
2007 Undergraduate Research Conference.....	April 11
Chemistry Phonathon.....	April 18
2007 Spring Banquet.....	April 27
Spring Commencement.....	May 12
Fall Semester Opens.....	August 20
Fall Picnic.....	August 27
Homecoming.....	October 19-20
Fall Commencement.....	December 15

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UMR Chemistry Department Faculty Members Received Arts & Sciences Teaching Awards



Three Chemistry faculty members from the College of Arts and Sciences (CAS) at the University of Missouri-Rolla were honored for their excellence in teaching in 2005-2006 during a reception held Monday, Oct.9, 2006.

Dr. Paula Lutz, dean of the UMR College of Arts and Sciences, presented the awards.

The CAS Excellence in Teaching Award is given each year to College of Arts and Sciences faculty members in two categories. “We wanted to recognize those faculty who teach well to a large number of students (more than 100 per year) and those who teach labs,” explains Lutz. In addition, an award for freshmen – or first year – tenure-track faculty honors those faculty members who achieve this excellence in their initial year at UMR.

Award winners were selected by a committee of Curators’ Teaching Professors in the College of Arts and Sciences based on student evaluations of faculty members done by the Committee for Effective Teaching at UMR. All college faculty, with the exception of Curators’ Teaching Professors, are eligible for the awards.

Dr. Harvest Collier, vice provost for graduate and undergraduate studies and professor of chemistry, and Dr. Yinfa Ma, professor of chemistry, were selected for CAS Excellence in Teaching Awards in the lecture category. They taught more than 100 students in lecture classes during 2005-2006. Dr. Collier met the award requirements while teaching courses with more than 200 students.

Dr. Terry Bone, lecturer in chemistry, was selected for the CAS Excellence in Teaching Awards in the lab category. He taught three or more lab courses in 2005-2006.



2007 Chemistry Phonathon



Last year’s Chemistry Department phonathon was held on April 20, & 23-26, 2006 and was a success. The UMR Chemistry Department received pledges totaling \$9,900.00. Thanks to all who made this possible, and thanks for supporting the students.

This year’s phonathon will be held April 18, 19, & 22-24. We will begin calling our alumni on April 18, 2007. When the phone rings, please take a moment to share some of your Rolla experiences with a current student, and say “Yes,” when asked to make a pledge. Taxpayer support accounts for 40% of the university’s revenue, making your contribution a vital ingredient in the revenue pie. Any amount you give will be appreciated.

Make your contribution today to help our students.



2006-2007 Scholarship Recipients



William Hamlet Webb Endowed Scholarship Fund

Charles Anderson Jr.
 Tara Banaszek
 Jonathan Brace
 Christopher Campbell
 Joshua Carey
 Tyler Fears
 Taylor Hahn
 Elyse Hendrickson
 Brian Howell
 Megan Kreitner
 Martin McPhail
 Rachel Moore
 Zachary Pettit
 Emily Spearl
 Yi-Jen Su
 Stephanie Velez
 Alan Windhausen

Scholarship on behalf of Tnemec Company and Its Representatives, in support of the Albert C. Bean, Sr. Scholarship and Loan Foundation

Kylee Hyzer
 Tracie Kost

Davies Family Endowed Scholarship Fund

Brittany Hood

James and Julia Stoffer Scholarship Fund

Jason Bohanon

Peter H. Pietsch Scholarship Fund

James Buergler
 Bryce Hamilton
 Angela Rudolph

William & Arlene James Scholarship Fund

Melissa Leek
 Tracy Rademan
 Gena Robertson
 Timothy Smiley

Wouter Bosch Endowed Scholarship Fund (including The Coatings Industry Education Foundation Scholarship Grant from the Federation of Societies for Coatings Technology) and the grant from the Kansas City Society for Coatings Technology

Karissa Braaten
 Brooke Burroughs
 Brandi Clark
 Elizabeth Cooley
 Clayton Dennis
 Elizabeth Garvin
 Rachel Gruber
 Kylee Hyzer
 Christopher James
 Joseph Kellogg
 Amanda Koenig
 Tracie Kost
 Travis McDowell
 Benjamin Murrell
 Megan Oldroyd
 Bradley Porter
 William Raine
 Danielle Warchol

The Coatings Industry Education Foundation TRIGG Scholarship Recipient

Travis McDowell

Congratulation to all of our recipients

May

Lynell Gilbert, PhD
Burak Metin, PhD
Suman Penugonda, PhD
Robert Victor Hull, MS
Rakesh R. Nambiar, MS
Kyle Anderson, BS
Marc Armbruster, BS
Julie Breckenridge, BS
Miranda Ceballos, BS
Emily Hackworth, BS
Shannon Howell, BS
Michael Webb, BS

2006 Graduates



July

Cynthia Bolon, PhD
Weifeng Cao, MS
Feng Liu, MS
Guotao Lu, MS
Kevin Kos, BS

December

Sean Gilliam, PhD
Srinivasa Gorla, PhD
Suneetha Mare, PhD
Wei Wu, PhD
Di Xiao, PhD
Ranjith Kolli, MS
Rong Shi, MS
Hao Wang, MS
Lili Wang, MS
Xiaojiang Wang, MS
Travis McDowell, BS

UMR Chemistry faculty member received excellence award

Twenty-one University of Missouri-Rolla faculty members received Faculty Excellence Awards from UMR Chancellor John F. Carney III during a dinner that was held on Dec. 18, 2006.

The awards are given annually to recognize teaching, research and service excellence. Each award winner received a \$2,500 stipend funded by industry and alumni contributions.



The 2006 recipient for Chemistry was Dr. Nuran Ercal, professor of chemistry.

UMR Chemistry faculty member received teaching award

Forty University of Missouri-Rolla faculty members received the Outstanding Teaching Award for 2006 during a luncheon held Monday, Dec. 11, 2006, on campus.

The Outstanding Teaching Award is given each year to faculty members recognized by the UMR Committee on Effective Teaching. The committee bases its selections on student evaluations of faculty members.

The 2006 recipient for Chemistry was Dr. Yinfa Ma, professor of chemistry.





Contributions

3M Foundation
Abbott Laboratories
Albert C. Bean, Sr. Scholarship &
Loan Foundation
Aventis Pharmaceuticals, Inc.
Boeing Company
Borg-Warner Foundation, Inc.
Caterpillar Foundation
CIEF/Federation of Societies for
Coatings Technology
Emerson
Engelhard Corporation
Frontage Labs
General Electric
Kansas City Society for Coatings
Technology
Lockheed Martin Corporation
Merck Company Foundation
National Philanthropic Trust
NewMarket Corporation
Olin Corporation Charitable Trust
PPG Industries Foundation
Shell Oil Company Foundation
Tyco International Ltd.
Union Pacific Corporation

Gifts

Adams, John E.
Akers, James E.
Akers, Jill
Anderson, Dennis R.
Anderson, Robert K.
Banks, Matthew W. & Amy
Barklage, Amy L
Beckmann, Karen L.
Bennett, Garry A
Bennett, Martha A.
Bertrand, Gary L.

Bierman, Frederick
Bohanon, Joseph
Boulos, Mervet S.
Brent, Bill M.
Brummel, Roger N.
Burns, Harry A.
Byrd, Alicia Kathleen
Cape, Christopher
Carman, Frederick R. Jr.
Chen, Szu-Chain F.
Christen, Jimmie D.
Covault, Richard A.
Craig, Mary R.
Davies, Carol A.
Degood, John
Dong, Feng
Dover, George Martin
Dugan, Daniel C.
Duncan, Jeremiah
Dunning, Thomas H., Jr.
Duong, Khang
Eckler, Paul E.
Evers, April M.
Faes, John G.
FCR, Inc.
Fischer, Gary R.
Flaim, Tony David
Flanders, Thomas M.
Gianino, Jo-Ann
Gold, Roy J.
Grasdock, Orville
Griffin, Paul D.
Hardin, David P.
Hawkins, Rodney B.
Haynes, Michael A.
Heritage, Robert L. Jr.
Higgins, Patricia A & Arthur
Hoiness, David
Horton, H. Robert
Ihms, David W.
Iverson, Jon R.
James, William J.
Kaiser, Mark E.
Kennedy, Floyd R.
Kirby, Kurt Allen
Knox, James R. Jr.
Larouche, Andrew O.
Lee, Jauh-Tzuoh
Lewis, Kevin D.
Li, Song
Lian, Norman D
Lin, Geng

Little, Billy F.
Lutz, Dale R.
Magruder, Gary C.
Manuel, Oliver K.
Mason, Nicole R.
Mathkar, Shilpa Suresh
Mayer, Clarence D.
Menges, Randy A.
Mongillo, Christopher B.
Naeger, Melanie G.
Narayan, Subramaniam
Nickols, Susan M.
Oostendorp, David J.
Osborne, David W.
Parks-Ratkowski, Donna K.
Patterson, Barbara R.
Reimer, Michael T.
Reimer, Melissa
Ridenour, Kristin
Rock, Brian A.
Rowton, Richard
Sanders, Amelia G
Schroeder, Charles E.
Schucker, Gerald D.
Shackelford, Marshall B.
Shermer, William D.
Silkwood, Laura A
Six, Ronald Kelvin
Smith, Paul J.
Stevens, Anthony
Strait, Darrell R.
Straub, John C. III
Student, Patrick
Sweeney, Edward G.
Tabor, Kenneth E.
Taylor, Christina M.
Theys, Angela
Thompson, Larry F
Trundle, Heather Christman
Vinansky, George, Jr.
Vitek, Richard K.
Wang, Heping
Webb, Ruby
Wethington, Ann P
Wideman, Lawson G.
Wyzlic, Gerald
Yeoman, Sherree
Zientara, Gina

Thank you



Greetings from the
Chair

Greetings from a frigid south central Missouri. As we steam into the second half of the 06-07 school year big changes at UMR are in the wings. The restructuring planning process is complete and the Chancellor has announced the new academic and administrative structure to be implemented by July of this year. Those of you who have kept abreast of the proposed changes at UMR will know that we are about to disband the existing schools and colleges in favor of a flatter organizational structure where the chairs of all departments, vice provosts for academic, undergraduate and graduate affairs and research will all report directly to the office of the Provost. Although not all the implications of such an extensive restructuring are understood at this time, it is clear that each department will have significantly more autonomy which for a proactive and productive department like Chemistry is not all bad.

Look for more news of life after restructuring in the next newsletter.

Our research productivity is paying off. Recently awarded patents are generating income for the department and Professors Nick Leventis and Lia Sotiriou-Leventis and Jim Stoffer are to be congratulated for their hard work. In a time when budgets are tight, return on our research investments is greatly appreciated.

We have reopened the search for the Vitek Chair in Biochemistry. The department was not successful in recruiting the candidate I mentioned in my last newsletter but we have high hopes that we will receive a good set of new applicants following this announcement.

Service teaching in the department is an important responsibility. Each year we teach at least 835 students freshman chemistry and with increasing enrollment at UMR each year the number of students increases. These students are provided with three hours of lecture, one hour of recitation, and three hours of lab each week. ACS guidelines limit laboratory sections to less than 18 students each. A simple calculation reveals that 46 sections of freshman lab must be provided each year. The coordination of the lab component of Chem 1, which includes the management of 26 graduate teaching assistants (GTA's) is in the capable hands of our newest faculty member Dr. Cyndie Bolon who joined the faculty to assume the position of Chem 2 lecturer/coordinator in August last year. Cyndie is no stranger to UMR however; in May 2006 she successfully defended her PhD thesis and while a graduate student at UMR her extensive GTA experience provided her with the sound basis to competently run the freshman laboratory program. The lecture component is run by a team of some of our best teachers lead by Dr. Klaus Woelk. The Chem 1 lecture component has won recognition for excellence not only on the UMR campus but also from our peer institutions. At UMR it is used as a model for service teaching students from multiple disciplines.

I wish you all a great 2007 and look forward to sharing more news from UMR in the next letter from the Chair.

With best wishes to all,

Phil Whitefield

Chemistry Professor received the Polymeric Materials: Science & Engineering Fellows for 2007



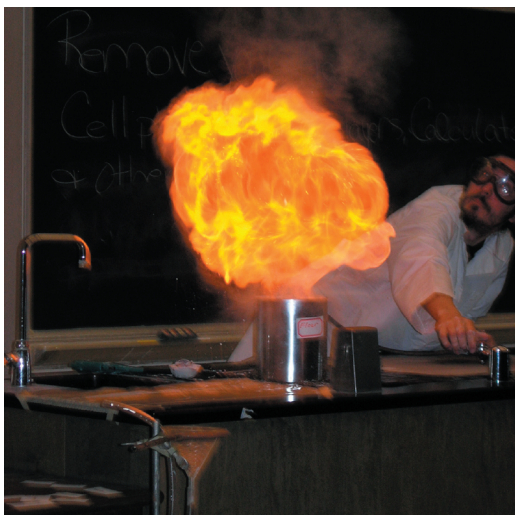
The ACS Division of Polymeric Materials: Science & Engineering (PMSE) has named a Chemistry Professor as one of its 2007 fellows. Dr. James Stoffer is Curators' Professor Emeritus of Chemistry at the University of Missouri-Rolla. His research activities are centered on polymers and coatings science. He and his coworkers prepared the first transparent composites for use as aircraft windows. Recently, they developed rare-earth materials as replacements for highly toxic chromium as the corrosion inhibitor for aluminum.

W. T. Schrenk Society

The W. T. Schrenk Society is the chemistry club on campus. Named after Walter T. Schrenk, our society was founded in 1960. We have previously been, and are in the process of becoming, ACS (American Chemical Society) affiliated. Although we are a chemistry club, we are open to all majors and have everything from chemistry to psychology.



Logo and jokes.

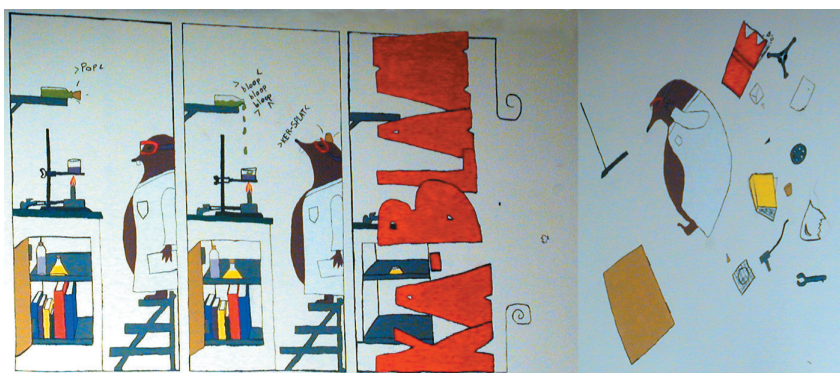


Peris Carr, graduate student, and his dust explosion at the 2006 magic show.

Throughout the year we have events which benefit both community and campus. In the Fall Semester we have faculty speakers at every other meeting. The faculty discuss their research as we try to promote undergraduate research. We also participated in Bridging the Gap, a program that invites Girl Scouts to campus for a day to earn various merit badges.

National Chemistry Week also falls during the all semester. We had a library display case as well as having a movie night on campus, open to everyone. The spring semester is spent in preparation for our magic show, which is open to elementary school-aged children and their families. We have a hands-on portion and a demonstration portion, both of which get them excited about chemistry and other sciences. Our magic show will be on April 14 this year.

Our extra projects this year included painting Schrenk G3. A few years ago, AXE, the professional chemistry fraternity, painted a massive periodic table on one of the walls.



Dr. Hoiness decided that the other side of the room seemed to be lacking something and asked us to paint it. As you can see in some of the pictures, we painted a comic on the upper corner of the room, as well as painting a logo and chemistry jokes on the side of the room.

We also will be working with high school students participating in the Science Olympiad this semester.



From the magic show in spring, 2006.

Dr. Schuman is in the process of blowing up his balloons.



Group picture on top of the scaffolding.

Back Row: Brandi Clark, Ben Haring, Cameron Mings, Angela Rudolph, Tara Banaszek.
Front Row: Billy Raine, Josh Holzhause, Kimberly Earl, Navarre Bartz, Alan Windhausen.

The Career Opportunities Center at the University of Missouri-Rolla

Option 1

The Career Opportunities Center at the University of Missouri-Rolla offers a variety of services to assist Alumni in their career search. Whether you are unemployed or unhappily employed, the COC can be of service to you.

As a graduate of UMR, Alumni can receive career advising, cover letter and resume critique and entrance to both the Fall and Spring Career Fairs at no charge.

A non-refundable registration fee of \$40.00 per year provides MonsterTRAK and InterviewTRAK entrance, in addition to Online Resume Referral potential and access to the Career Contact & Alumni Network.

To gain more information about UMR Alumni services visit the COC website at www.campus.UMR.edu/career or contact Amy Lewis at lewisaj@umr.edu. Also, consider reviewing www.sciencejobs.com for further career assistance.

Option 2

The Career Opportunities Center at the University of Missouri-Rolla offers a variety of services to assist you in your career search. Whether you are unemployed or unhappily employed, you have come to the right place.

As graduates of UMR, Alumni can receive career advising, cover letter and resume critiques, and entrance to both the Fall and Spring Career Fairs at no charge.

A non-refundable registration fee of \$40.00 provides the following services for one year:

- **MonsterTRAK & InterviewTRAK**- An internet site that lists entry level and experienced job vacancies specifically targeted to UMR alumni. This site can be accessed 24 hours a day with a password provided at the time of registration.
- **Online Resume Referral**- Once registered and your resume has been downloaded into MonsterTRAK, your resume will be forwarded to requesting companies when it meets the specified job requirements.
- **Career Contact & Alumni Network**- A network of alumni and their contact information to assist students in their full-time, co-op and summer job search. Log into MonsterTRAK to access this data.

Additional free resources include:

- **Ask a Career Expert** - Do you have a job-search or career related question? Our team of advisors is ready to help!
- **LinkedIn Alumni Group** - LinkedIn is a networking resource that both assists you in keeping in touch with your personal network contacts and gives you exposure to tens of thousands of recruiters. The official LinkedIn UMR Alumni networking group expands your network to include your fellow Alumni and gives recruiters a centralized location to find UMR grads for their hiring needs!
- **Recommended Internet Job Search Resources** - A list of our most highly recommended resources for your job search on the web.
- **Resume Samples** - Get a quick look at examples of effective resumes.

To gain more information about UMR Alumni services visit the COC website at www.campus.UMR.edu/career or contact Amy Lewis at lewisaj@umr.edu. Also, consider reviewing www.sciencejobs.com for further career assistance.

Coatings Institute

Short Courses

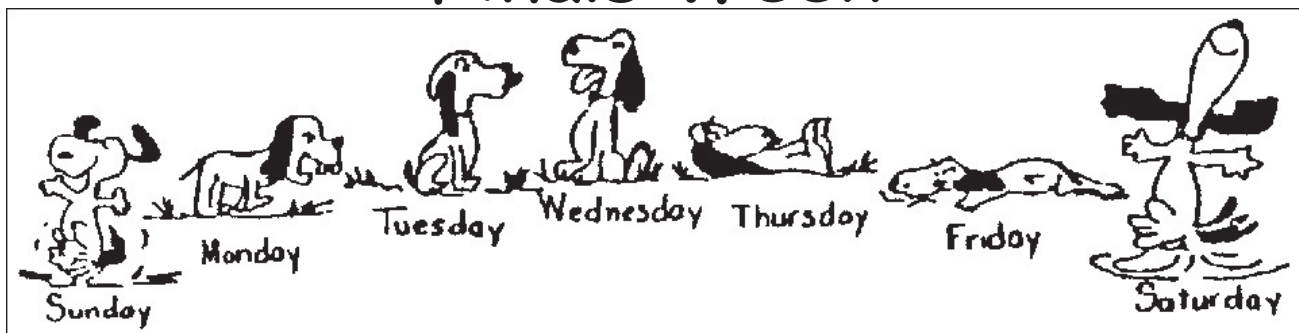
Spring 2007 Short Course Dates

Next spring we will be offering “Basic Composition of Coatings” March 12-16, 2007 and “Introduction to Paint Formulation” May 14-18, 2007.

Summer 2007 Short Course Dates

Next summer we will be offering “Introduction to Coatings Composition and Specifications” July 16-18, 2007, in St. Louis Missouri.

Chemistry Students after Finals Week



Alumni Updates

Wei-Hang “Timothy” Wang

(PhD 1995) was appointed director of corporate partnering for Konarka Technologies Inc. in Asia.

William Mark Barnett

(PhD 1991) was accepted into Medical School at the University of Missouri-Columbia for Fall 2007.

Burak Metin

(PhD 2006) has accepted a scientist position at Solopower in Milpitas, CA.

Arun Sahu

(MS 2005) is doing an internship at Winn-Dixie Pharmacy in Jacksonville, FL.

Pavan Challa

(MS 2005) is working for V-Soft Consulting Group, Inc.

Kaz Nagashima

(PhD 1999) still works at AIST national research institute where I am R&D-ing a commercial gas hyperpolarizer for NMR and MRI.

Subra Narayan

(PhD 1992) now works for Chemtura (name change from Great Lakes Chemical) and is working on polymer modifiers besides flame retardants and stabilizers. His travel log can be found at ‘Adventures in the Yucatan’, <http://www.boloji.com/writers/subranarayan.htm>.

Let us know where you are and what you are doing.

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or

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<dawnd@umr.edu>
or <ehzm@umr.edu>

Name _____ Year attending UMR _____

Current activities/interests _____

Family _____

News/Plans _____

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