

Missouri S&T Building To Be Renovated, Renamed After Chemistry Professor

Straumanis Hall, which houses the Materials Research Center on the campus of Missouri University of Science and Technology, was scheduled to be renovated beginning summer 2010. In conjunction with the renovation, the building will be renamed Straumanis-James Hall in honor of Dr. William (Bill) James, professor emeritus of chemistry at Missouri S&T.

By the end of the summer 2010, James had completed 57 years of service in teaching and research to the university. Dr. Martin Straumanis, a former professor of metallurgical engineering, was one of James' friends and colleagues. Straumanis died in 1973.

A dedication ceremony was held at the soon-to-be renovated building on May 14. James addressed graduating students at a commencement ceremony later that night and received an honorary doctorate.

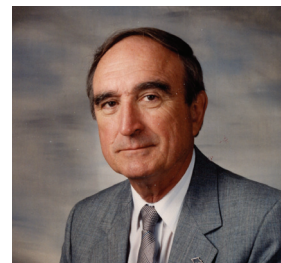
In 1964, James co-founded the university's Graduate Center for Materials Research, where he is still a senior investigator. He served as director of the center from 1964-75 and again from 1980-82.

James played a key role in the establishment of Ph.D. programs in chemical engineering and chemistry and was the major advisor to the university's first recipient of a Ph.D. in chemical engineering. He is a past recipient of a Fulbright research professorship and has studied under a Nobel laureate in France. He was one of the first faculty members at S&T to start a company based on his research, MEAD Chemical Co., and helped establish Brewer Science Corp. in Rolla.

James has received the Chancellor's Medal from S&T and is a member of the university's Academy of Chemical Engineers and Academy of Chemists and Biochemists.

Straumanis and James are thought to have been the first researchers on campus to receive funding from the National Science Foundation, which, incidentally, has selected a \$1.8 million proposal for funding to help renovate the heating, ventilation, air conditioning and electrical systems in Straumanis-James Hall.

"This will upgrade the building inside and out," says Dr. Matt O'Keefe, professor of materials science and engineering at S&T and current director of the center. "When completed it will provide the infrastructure to continue the world class research done by the students, staff, and faculty associated with the center."



Dr. William (Bill) James

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Welcome!



Dr. Richard Dawes

The Chemistry Department is pleased to welcome Dr. Richard Dawes as a new faculty member in the Fall 2010 semester. Dr. Dawes received his PhD from University of Manitoba in 2004. His specialization is in physical chemistry, theoretical spectroscopy, and molecular dynamics. Dr. Dawes' research interests are in the areas of hydrocarbon combustion and condensed-phase molecular dynamics. We are delighted to have Dr. Dawes join our team.



Dr. Rex Gerald

Also beginning employment for the Chemistry Department in the Fall 2010 semester is Dr. Rex Gerald. Dr. Gerald is the Senior Research Scientist and he is managing Chemistry's Nuclear Magnetic Resonance (NMR) instrumentation. He comes to us from Argonne National Laboratory in Chicago. Dr. Gerald's experience and expertise are an asset to our department.

Karla Briggs Karla started work for the Chemistry Department as Sr. Secretary in August, 2010. Karla took Kathy Eudaly's position after she left for different employment. We are happy to have Karla join us!



Congratulations, Michael Myers! Mike, Glassblower Specialist II, retired from Chemistry in August 2010 after 32 years of dedicated service to the department and the university. Mike has been enjoying time at home, playing with his granddaughter and keeping up with his hobbies. Mike also has come back to work for the department on an as needed basis.

Congratulations also to **Drs. Amitava Choudhury and Manashi Nath**. They are the proud parents of Manmita Choudhury who was born on November 11th. She joined her big brother at home and the family is doing well!

GRADUATES!

July 2010

Xiaoliang Cheng, PhD
Yongqing Jiang, PhD

December 2010

Tyler Fears, BS
Dustin Kurath, BS
Stephen Gibbons, PhD
Boonta Hetayothin, PhD
Kalyan Manda, PhD
Guojun Mu, PhD
Wenjia Zhang, PhD



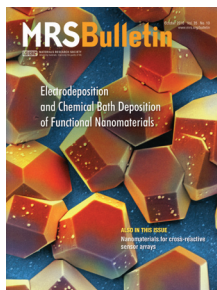
CONGRATULATIONS

May 2010

Brandi Clark, BS
Nathan Decker, BS
Amanda Koenig, BS
Martin McPhail, BS
Megan Oldroyd, BS *
Ashley Porter, BS
Bradley Porter, BS
Matthew Porter, BS
Timothy Smiley, BS
Alan Windhausen, BS
Weiqing Chen, MS
Piyawan Krisanangkura, PhD
Honglan Shi, PhD
Arumugam Thangavel, PhD

* Megan finished and defended her honors thesis before the Honors Thesis Committee. She was 1 of only 3 for the entire campus to earn the distinction of "Honors Academy Fellow" at May commencement, and the first ever for Chemistry.

Electrodeposition: Mimicking Mother Nature



One of Missouri S&T's most prominent nanomaterials experts, **Dr. Jay A. Switzer**, served as guest editor for the October issue of MRS Bulletin, the publication of the Materials Research Society. Along with co-guest editor Gary Hodes of Weizmann Institute of Science, Switzer discussed the state of electrodeposition and chemical bath deposition for nanomaterials in the issue's cover story.

The cover of the October 2010 issue of MRS Bulletin featured a colorized micrograph image of electrodeposited cuprous oxide with gold nanoparticles.

Written by: Andrew Careaga



Hot Research on Room-Temperature Synthesis of Aerogels

The process described in the latest research journal article by nanomaterials expert **Dr. Nicholas Leventis** and his team may be about room-temperature synthesis, but the article is among the hottest topics in the materials research community.

Leventis' paper -- One-step room-temperature synthesis of fibrous polyimide aerogels from anhydrides and isocyanates and conversion to isomorphous carbons -- was one of the hot features on the week of October 6, 2010 Journal of Materials Chemistry blog.

"In this study," wrote the JMC's Anna Simpson, "Nicholas Leventis and co-workers in the USA have described polyimide aerogels synthesized via a low temperature process through the rather underutilized reaction of dianhydrides with diisocyanates. These polyimide aerogels are compared with those obtained by the classic high-temperature amine route and are shown to be chemically identical but morphologically different. Overall, the isocyanate route has several distinct advantages over the classic route."

Written by: Andrew Careaga



Estate Gift Helps Missouri S&T Upgrade Laboratories

An estate gift in the amount of \$160,000 is enabling Missouri University of Science & Technology to upgrade biology, chemistry and physics laboratories on campus. The gift is from the estate of Jon T. Schneeberger, whose father, Fred C. Schneeberger, earned a bachelor's degree in general studies from the university in 1925.

Jon Schneeberger wanted to leave the gift to the university in honor of his father. Both men are now deceased. The trustee of the estate is Connecticut resident Dorothy Davison, Jon's niece.

The funds were intended to be used for a top campus priority. According to Dr. Robert Schwartz, vice provost for academic affairs at Missouri S&T, the freshman laboratories on campus were becoming outdated.

"All engineering disciplines have their foundation in the traditional science of biology, chemistry and physics," says Schwartz. "World-class laboratory experiences are a vital component in the education of our students, including those who are seeking degrees in one of the 15 undergraduate engineering disciplines offered by Missouri S&T."

The estate gift will help upgrade nine laboratories, impacting approximately 800 new students per year.

MEMORIALS



Dr. Tadashi Tokuhiro passed away peacefully on August 8, 2010 in Grapevine, Texas. Dr. Tokuhiro was employed with the Chemistry Department from 2002 until his death last year. Dr. Tokuhiro oversaw the Nuclear Magnetic Resonance (NMR) facility maintenance and training. He also taught physical chemistry laboratory classes. Dr. Tokuhiro was preceded in death by his wife, Reiko. He is survived by his two children Asako Fertitta and husband David, and Akira Tokuhiro and wife Victoria Banales, as well as two grandchildren.



Dr. Hector Oman McDonald, passed away July 18, 2010 in Fenton, Missouri. Dr. McDonald taught in the Chemistry Department for 35 years at MSM/UMR, now Missouri S&T. Dr. McDonald was involved in many clubs and activities with his church, community, and career. He is survived by his wife, Rosella; son Stephen McDonald and wife Kimberly; daughter Marsha Pounds and husband George; and three grandchildren.

Alumni News

Dr. James R. Knox, Jr (BS '63) was initiated into the Missouri S&T Academy of Chemists and Biochemists in May 2009. He was also awarded a Professional Degree in Chemistry at the May 2010 Commencement.

Dr. Robert McDaniel (PhD '74) is teaching Chemistry, AP Chemistry and Physics at St. Margaret's Episcopal School in San Juan Capistrano, CA. Bob and his wife, Katie, are awaiting the publication of their third book, Soap Makers Workshop, published by Krause Publications.

Dr. Yixiang Xie (PhD '98) joined the Chemical Nuclear Engineering (ChNE) faculty at University of New Mexico following his ten years of industrial practice.

Dr. Darrell R. Strait (PhD '74) passed away February 23, 2010. We extend our sympathy to his family and friends.

Share your news with us Just fill out the form on the back of this newsletter and mail it in!

New Hasselman Alumni House

The Hasselmann Alumni House will be a place to call home – not only for alumni, but also for students and friends. It will be a place where returning alumni connect with one another as well as faculty and current students at alumni celebrations; dinner gatherings before sports events, concerts and lectures; and key student events such as receptions for freshman convocation and senior graduation or career networking workshops. The building will include dining and social areas, a media lounge, courtyards and gardens, an alumni library and archives, meeting rooms, and offices for the staff of the Miner Alumni Association.



Thank you!!!

Contributions

3M FOUNDATION
ABBOTT LABORATORIES FUND
ALLIANCE FOR ADVANCED
COATINGS
BP FOUNDATION, INC.
CATERPILLAR FOUNDATION
DOW CHEMICAL COMPANY
FOUNDATION
HALLMARK CORPORATE
FOUNDATION
MONSANTO FUND
SHELL OIL COMPANY
FOUNDATION
SUN MICROSYSTEMS
UNION PACIFIC CORPORATION
WYZLIC TAX SERVICE

Gifts

ADAMS, KAY
AKERS, JAMES EDWARD
ALBERT C. BEAN, SR. SCHOLARSHIP &
LOAN FDN.
ALTEPETER, MICHAEL A
ANDERSON, DENNIS R
ANDERSON, HOMER L
ANDERSON, MYRA S
ANDERSON, ROBERT K

BAER, TED A
BARTLETT, RUTH A
BENNETT, GARRY A
BIERMAN, FREDERICK H
BOHANON, JOSEPH T
BRUMMEL, ROGER N
BURCHFIELD, THOMAS E
BYRD, ALICIA K
BYRD, SAMUEL M

CAPE, CHRISTOPHER C
CHEN, SZU-CHAIN F
COVAULT, RICHARD A

DEGOOD, JOHN S
DUNCAN, PAMELA MARIE
DUNNING, THOMAS H
DUONG, KHANG VAN-SI

ECKLER, PAUL E
EVERS, APRIL MARIE
EVERS, THOMAS MICHAEL

FAES, JOHN G
FLAIM, TONY DAVID
FLORI, BEVERLY J
FLORI, RALPH E

GRANNEMANN, HARRY NEAL
GRANNEMANN, LYNN
GRASDOCK, ORVILLE
GRIFFIN, PAUL D

HARDIN, DAVID P
HAWKINS, RODNEY B
HAYNES, MICHAEL A
HERITAGE, ROBERT L
HIGGINS, ARTHUR J
HIGGINS, PATRICIA A
HOFFMAN, GLEN W
HOLDMAN, JON MARK

IHMS, ANN A
IHMS, DAVID W

JAMES, WILLIAM J
JIANG, YUTONG
JONES, RANDALL W

KIRBY, KURT ALLEN
KNOX, JAMES R

LAEGELER, ANDREW PARRY
LAEGELER, MOLLY T
LISSANT, KEITH

MACDONALD, JOHN
MASON, NICOLE RENEE
MAYER, CLARENCE D
MENGES, RANDY ALLAN
MILNE, ANNIE HALL
MUNSON, ELIZABETH
MUNSON, WILLIAM F

NAIR, MANIKANTAN, B
NAEGER, MELANIE G
NAEGER, ROBERT J
NARAYAN, SUBRAMANIAM
NICKOLS, SUSAN MARIE
NOEL, KENNETH

OTTEN, CAROLYN

PAYNE, KATHRYN E
PERKINS, TRACY SUZANNE

REDMAN, WILLIAM LYNN
REIMER, MICHAEL TODD
RIDENOUR, KRISTIN RENEE
ROWTON, RICHARD

SANDERS, AMELIA G
SCHROEDER, CHARLES E
SCHUCKER, GERALD D
SCHUMAN, THOMAS
SHACKELFORD, MARSHALL B
SILKWOOD, BLAKE E
SILKWOOD, LAURA
SITARAM, SRINIVAS PRAVIN
SMITH, PAUL J
SNARRENBERG, JAMES D
STRAUB, JOHN CHRIS
STRITE, RUSSELL R

TAYLOR, CHRISTINA MARIE
THOMLISON, CLYDE D
THOMPSON, LARRY F
TREASURER, ROBERTA L

VINANSKY, GEORGE
VITEK, RICHARD K
VOGEL, MATTHEW F

WEBB, WILLIAM
WEBB, MRS. WILLIAM RUBY
WETHINGTON, ANN P
WHITNEY, DENNIS L
WIDEMAN, LAWSON, G
WILLIAMS, GARY EDWARD
WILLIAMS, MARGARET
WILSON, MELISSA R

YEOMAN, SHERREE LEE

ZIENTARA, GINA ANN
ZIMMERMAN, MARK
ZWEERINK, GERALD L

Your gift makes a
difference.



GREETINGS FROM THE CHAIR

As we slowly emerge from a cold winter spell that caused the campus to close for two consecutive days February 1st and 2nd, I am pleased to say the chemistry department continues to thrive. Undergraduate enrollment in chemistry is up (currently at 79) as is enrollment campus wide. The average ACT scores for our incoming freshmen was 27.5 in comparison to the campus average of 27.7. Despite the state of the national economy we were able to award a total of \$86,625 in merit scholarships to both freshmen and upperclassmen with \$30,000 earmarked for incoming freshmen. Effectively utilizing these resources is the responsibility of the department scholarship committee and a key element of their award policy is to assure the awardees of continued support for up to 8 semesters provided the awardees meet rigorous academic standards as chemistry majors. For your interest, I have provided a table below which outlines the award criteria.

Scholarship Award Criteria

Amount	ACT	Class rank	Incoming GPA	GPA Required to keep scholarship for up to 8 semesters
\$2,000	≥ 30	$\geq 80\%$	≥ 3.6	3.50
\$1,250	27, 28, 29	$\geq 65\%$	≥ 3.4	3.25
\$1,000	25, 26	$\geq 65\%$	≥ 3.4	3.00
\$500	23, 24	$\geq 65\%$	≥ 3.4	3.00

Our graduate program has a total of 58 students with 91% pursuing PhD's in a broad spectrum of specialty fields from early cancer detection to the characterization of aerospace emissions. Our graduate program is heavily underwritten by our research productivity and its associated externally sponsored research expenditures which for the last academic year exceeded \$1.6 million for the department.

With the recent departure of Dr.'s Frank Blum, Charles Chusuei, and one of our secretaries Kathy Eudaly, the partial retirement of our scientific glassblower Mike Myers and the sad death of our colleague and friend Tadashi Tokuhiko, the face of the department has changed. This year we welcomed Dr. Richard Dawes, a computational chemist, who has taken a tenure-track appointment as assistant professor, Karla Briggs, a new secretary who replaces Kathy, and Dr. Rex Gerald, who has joined us to manage and operate our new and improved NMR capabilities. A recent \$2M Department of Defense award has resulted in the department acquiring a new state of the art solids NMR capability. With this acquisition the department will have an NMR facility to rival the best in the state.

Once again I have only touched on a few of the many great things that are taking place in Chemistry at Missouri S&T. Enjoy the latest edition of "Chemcommunicator" and catch up on what's going on. Have a great year and last but not least thank you all for your continued support.

Best wishes,

Phil Whitefield

2011 Chemistry Phonathon

Last year's Chemistry Department phonathon was held in April and thanks to all the alumni it was a great success. The Missouri S&T Chemistry Department received pledges totaling \$11,700. Thank you to all those who made this possible, and thank you for supporting the students.

This year's phonathon will be held April 13, 14, 17, 18 and 19, 2011. With the economy as it is, please answer your phone 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 greatly appreciated.



Academic Scholars 2009-2010

This recognition is given to full-time students who earned a 3.2 or above GPA for that semester.

Fall 2009

Selin Acar
Kelsey Bass
Erin Bird
Callie Bracht
Alicia Bradley
Casey Burton
Brandi Clark
Aline Collin
Brice Curtin
Karl Dachroeden
Caleb Hull
Nicholas Jentsch
Joseph Kellogg
Dustin Kurath
Benjamin Mahala
Caleb Marting
Martin McPhail
Dava Mentis
Andrew Miller
Ariel Mollhagen
Dominique Nocito
Annalise Pfaff
Ashley Porter

Bradley Porter
Matthew Porter
Ryan Rader
Andrew Wessel
Matthew Willmering
Alan Windhausen
Rachel Wolfe

Spring 2010

Selin Acar
Brett Babcock
Kelsey Bass
Marissa Bergthold
Alicia Bradley
Casey Burton
Brandi Clark
Aline Collin
Karl Dachroeden
Katherine Higgins
Nicholas Jentsch
Amanda Koenig
Dustin Kurath
Benjamin Mahala
Richard Marks

Caleb Marting
Martin McPhail
Dava Mentis
Andrew Miller
Ariel Mollhagen
James Moore III
Dominique Nocito
Annalise Pfaff
Ashley Porter
Bradley Porter
Matthew Porter
Ryan Rader
Timothy Smiley
Hamilton Vernon
Megan Walcher
Jessica Walker
Andrew Wessel
Matthew Willmering
Rachel Wolfe

2010-2011 Scholarship Recipients

Bean Scholar

Dustin Kurath
Benjamin Mahala

Wouter Bosch Scholarship

Brett Babcock
Casey Burton
Frederic Bush
Lindsey Deen
Caleb Hull
Dustin Kurath
Benjamin Mahala
Caleb Marting
Andrew Miller
Matthew Willmering

Davies Scholarship

Ashley Upschulte

Stoffer Scholarship

John Armstrong

William & Arlene James Scholarship

Joseph Barbagiovanni
Marissa Bergthold
Erin Bird
Alicia Bradley
Jonathan Colaric
Olivia Cox
Brice Curtin
Kathryn Czeschin
Jordan England
Joseph Hamilton
Alison Hart
Hunter Horton
Laura Meyer
Aubrey Moore
Heath Moore
Dominique Nocito
Patrick Stanley
Sarah Suerig
Angela Swyers
Jacy Waldrop
Kelly Walsh
Emily Weigel

Ryan Wilkerson
Courtney Williams
Casey Zimmerman

Pietsch Scholarship

Brandon Basler
James Moore, III
Ryan Rader
Hamilton Vernon
Joshua Wilmes

William H. Webb Scholarship

Selin Acar
Kelsey Bass
Aline Collin
Nicholas Jentsch
Dava Mentis
Ariel Mollhagen
Annalise Pfaff
Jessica Walker
Andrew Wessel

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Rolla, MO 65409-0010**

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what you are doing.*

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Missouri University of Science and Technology
142 Schrenk Hall
Rolla MO 65409

or

fax to (573) 341-6033
email to
briggsk@mst.edu
or chzm@mst.edu

Name _____ Year attending UMR/Missouri S&T _____

Current activities/interests _____

Family _____

News/Plans _____
