Dear Alumni, Colleagues and Friends,

Greetings from Rolla! I’ve been saying that a lot lately as I still can’t get used to saying “Missouri S&T.” The name may be different, but we still have the same rock solid foundation of students, staff and faculty. I’m typing this introduction from the MS&T 2008 conference – you’ll be glad to know that the Materials Advantage Student Chapter and the Keramos Honor Society both just captured the Outstanding Chapter awards. What better way to demonstrate that we have the best students in the country! I couldn’t imagine things being any better for the students or faculty of the department. In this newsletter you will find all sorts of positive news such as our growing enrollment, job placement, scholarship levels, student awards, research activities, and faculty recognitions and awards. I won’t be redundant and summarize all the great things going on; I hope you’ll take the time to read this newsletter from front to back. And many of these accomplishments would not have been possible without the strong support of our alumni. We all thank you profusely for your dedication to your alma mater.

The only sad news to report is the passing of Professor Tom O’Keefe on April 13th. He had been successfully fighting cancer for over a year, and his sudden passing came as a shock to all. As Chairman I get to meet and speak with many alumni, and one of their favorite questions is always “How is Professor O’Keefe doing?” followed closely by a personal story of how he went out of his way to help them along their educational path. His passion for teaching and electrochemistry was an inspiration for all to follow. Student success was always priority #1 for Tom, and his 43 years of steadfast dedication to them is a foundation of the department and the university.

About the time you receive this newsletter MSE students will be calling you during our annual Phonathon from October 19th-23rd, and 26-27th. Please don’t vacate the premises on those nights! Last year the Metallurgy and Ceramics departments raised $76,381. Thank you for helping the future generations of Missouri S&T Metallurgical and Ceramic Engineers! Thanks also go out to all of the alumni who visit us regularly – believe me when I say it impacts the students when you come to our banquets, attend the reception at the convention, and talk to them in the hallways when you’re on campus.

This past year has been another enjoyable one for me as Chair, and I hope the same can be said for the students, staff and faculty. Please stop by to visit when you can! We hope this newsletter finds you and yours in good health & spirits.
ABET Review: October 19th-21st

Every six years all engineering programs in the country undergo an accreditation review by the Accreditation Board for Engineering Training (ABET). During the ABET review we must demonstrate a series of 15 outcomes for all of our students (see http://mse.mst.edu/department/mission). This year both the Metallurgical and Ceramic Engineering programs are up for review. You have played an important role in this process – results from the surveys you have filled out were used as a major component of the Self-Studies which were prepared in June of this year. Thank you!

Departmental Scholarships at an All-time High

Over the past 6 years tuition and fees to attend Missouri S&T have continued to climb; a direct result of a shrinking state budget. Last year was the first year that campus revenue from tuition & fees exceeded the funds Missouri S&T received from the state. This trend is mirrored across the country as “public” institutions depend more heavily on the research mission and student support. For a student entering Missouri S&T this fall the annual tuition and fees amount to $8,924 for in-state students, and $20,015 for out-of-state students. Add another $7,360 for room and board, and you can see that the cost of education represents a significant expense. That said, Missouri S&T is still one of the best deals in the country! The department is blessed with many alumni-endowed scholarships, and this fall MSE was able to award:

- Metallurgy scholarships: $192,175
- Ceramic scholarships: $97,150

In addition MSE undergrads also received over $125,000 in scholarships from professional organizations, including the Foundry Education Foundation (FEF), Association for Iron & Steel Technology (AIST), Women’s Auxiliary to the American Institute of Mining, Metallurgy and Petroleum Engineers (WAAIME), and the Southwest Section of the American Ceramic Society. Our students are successful pursuing these scholarships because they are talented, and active in the student organizations in the department.

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The accompanying figures show where the CerE and MetE students have landed jobs over the last 8 years. Most of our students head to industry, although ≈25% head to graduate school to pursue an M.S. or Ph.D.
In December, 2007, Professor David G.C. Robertson retired after 22 years as a professor of metallurgical engineering in the department, and was named Professor Emeritus. On January 19, 2008, the department hosted a dinner at Matt’s Steakhouse in Rolla where the faculty, former students and friends and family had an opportunity to honor and thank David Robertson for his influence on their lives. Since his retirement, David has been working hard not only in Rolla, but all over the world. His travels have included consulting work in South Africa and his present gig as a visiting professor at Tohoku University in Sendai, Japan. It is widely rumored that he is also working a little more on his tennis. We will miss David’s daily presence, and we wish him the best of luck in his future pursuits.

David was born in Ireland and attended the Royal School of Mines at Imperial College in England, where he graduated 1st Class with Honors in Metallurgy. In 1968, he received his Ph.D. in Process Metallurgy at the University of New South Wales in Australia (where he also obtained Ruth) and began 40 years of teaching, researching and working with industry in the process metallurgy of smelting, refining and solidification. He started as a lecturer at Imperial College in England in 1969, and in 1978 made his way to Rolla to be a visiting Associate Professor at Missouri S&T. After wetting his appetite for Rolla, David spent a few more years at Imperial College before returning to the colonies full-time in 1985 as Professor of Metallurgical Engineering at Missouri S&T and Director of the Generic Mineral Technology Center for Pyrometallurgy. The Generic Center was a national research center with a budget usually in excess of $1,000,000. During his 22 years at Missouri S&T, David taught extractive metallurgy, applied thermodynamics and transport phenomena, and conducted research work on gas injection in melts, gas jet atomization of liquid metals, behavior of bubbles in melts, gas–solid reactions and mathematical modeling. He published over 100 technical papers and advised many M.S. and Ph.D. students. David is internationally renowned in pyrometallurgy, and has traveled to Mexico, South Africa, Canada, Norway, China, Australia, Japan, and England to give invited lectures, take part in conferences, and visit companies.

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David’s everyday presence in McNutt Hall will be missed, especially by students in senior design, graduate students working on research, and faculty that just forget how something is supposed to work. David is one of those professors that can make almost anything work, and is always willing to help students and faculty with a research project, even when he has to spend much of his time (and sometimes his money). We all wish David the best of luck in his journeys around the globe helping other students and industry improve their pyrometallurgical processes, but we also look forward to his return to Missouri S&T. Cheers to Professor David Robertson!

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### 2007 Phonathon Results

#### Ceramic Engineering

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<th>Class Year</th>
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<th>Caused (Donors)</th>
<th>Reference (Donors)</th>
<th>Total (Donors)</th>
<th>Donors</th>
<th>Caused (Donors)</th>
<th>Reference (Donors)</th>
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#### Metallographic Engineering

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### Material News

The generosity of our alumni continues to play an important role in helping our students succeed. Last year you helped us set a record for the Phonathon: 306 MetE alums provided $46,785, and 185 CerE alums $29,956. These totals include more than $10,000 in matching funds from many of your companies. Phonathon funds are used for many things that directly help recruiting and student professional development including:

- **Freshman scholarships**: Most of our endowed scholarships in the department do not allow us to give funds to freshmen who have designated Metallurgy or Ceramics as their major. Phonathon funds can be used in this manner, and it’s allowed MSE to recruit one of our largest incoming freshman classes ever.

- **Student group support**: The Materials Advantage, FEF, AFS, Keramos and Alpha Sigma Mu student organizations participate in many activities that are important for their professional development as well as recruiting for the department. Phonathon funds paid for their participation in many events including Engineers Week in St. Louis at the Science Center, field trips to numerous local industries, “Mr. Wizard” activities at local K-12 schools, BBQ’s for alumni and potential students, and attendance at the Fall MS&T conference. For example, Materials Advantage just won the Outstanding Chapter Award at the MS&T conference – collectively throughout the year they racked up over 1500 hours of service! They wouldn’t have been able to do this without your generous support.

- **Undergraduate lab equipment & supplies**: Phonathon funds are also used to supply the Mud Lab, Glassblowing Shop & Foundry with the materials they need to participate in the numerous tours which come through McNutt Hall. You’ll be glad to know that MSE is the top tour stop at Missouri S&T; last year over 2000 students came through.
In Memorium

Thomas Joseph O’Keefe was born on October 2, 1935 in St. Louis, the son of Tom and Hazel O’Keefe, and grandson of Irish immigrants, Tom and Alice O’Keefe. He died peacefully on Sunday, April 13th, 2008 at Phelps County Regional Medical Center with family at his side. Tom was married to Jane (Gilmartin) O’Keefe on Aug 31, 1957. He will be greatly missed by his immediate family, Tom and Rebecca O’Keefe and children of Glen Carbon, IL; Kate and David Weaver and children of Rolla, MO; Matt and Laura O’Keefe and children of Rolla, MO; Dan and Lee Ann O’Keefe and children of Edwardsville, IL; Maggie and Mike Holtrup and children of Rolla, MO; and Bob O’Keefe of Los Angeles, CA; one sister, Barbara Noelker of St. Charles, IL; and one brother, John O’Keefe, of San Rafael, CA; as well as by other numerous family and friends. Tom had been diagnosed with cancer over two years ago, but continued to work with his students. His sudden passing came as a shock to all. Indeed Tom had “retired” in name only, and came into work daily up to the very end, with his lunch packed in a brown paper bag.

Education

Tom attended the Missouri School of Mines and Metallurgy, and received his B.S. in Metallurgical Engineering in 1958. He worked for Dow Metal Products from 1959-1961, then returned to graduate school and obtained a Ph.D. in Metallurgical Engineering from the University of Missouri at Rolla in 1965. Immediately upon graduation he was offered a faculty position in Metallurgical Engineering, and a few years later an additional appointment as a Senior Investigator in the Materials Research Center (MRC), appointments that continued until he retired in 1999 as a Curators' Professor Emeritus.

Tom pledged the Missouri Mu chapter of Theta Kappa Phi (renamed Phi Kappa Theta in 1959) at MSM in 1953. He served as the faculty advisor to the fraternity from 1964 to 1999. Over 1000 men joined Phi Kap since he pledged; he was known to all in the fraternity as “Doc”, a name his grandchildren also called him.

Expertise

Tom’s research expertise was in electrometallurgy, hydrometallurgy, deposition processing, materials recycling, corrosion and metal films and coatings. Over a span of 43 years he graduated over 60 Ph.D. students, published 170 articles in refereed journals, had 11 issued US and Foreign patents, and received numerous research, teaching, alumni, lectureships, and outstanding paper awards including UMR’s Alumni Merit Award and the Outstanding Teaching Award. He was named a Curators’ Professor in 1985, the highest title that can be conferred upon a faculty member within the UM system. He was an active member in the American Institute of Mining, Metallurgical, and Petroleum Engineers (AIME) as well as The Minerals, Metals and Materials Society (TMS), serving on numerous boards and committees, as well as being the TMS-AIME Extractive Metallurgy Lecturer in 1991.

All of this is quite impressive, but numbers really cannot capture Professor O’Keefe’s essence as a dedicated, passionate educator. His attitude towards excellence in research and teaching carried through to his interactions with all students. Tom was “in the trenches” with them, giving direct and invaluable guidance with regard to experimental techniques and analysis. He was often sought out for his advice by all who knew him, and always took the time to help. Tom’s was a classic example of the professor-student relationship; he simply instilled a love of learning in all of his students and colleagues. This might be best expressed in the words of Chaucer, “And gladly did he learn, and gladly teach.” Many Met alumni ask if Tom is around whenever they visit or contact the department, and their request is often followed closely by a personal story of how he went out of his way to help them along their educational path. And one of the best things about Tom was that he didn’t wear his many achievements on his sleeve. He was a modest person who quietly went about his business, enabling the success of many students, faculty, staff and visitors, asking nothing in return. Student success was always priority #1 for Tom, and his 43 years of steadfast dedication to them is a foundation of the department and the university. Through Tom’s efforts our university is known the world over for excellence in metallurgical engineering.

On the personal side Tom maintained the highest standards in all endeavors, and was a very active member of St. Patrick Catholic Church in Rolla. He had an excellent sense of humor; it was simply impossible to be in a bad mood around him, and he always knew the right thing to say to make everyone laugh and be at ease. He always brought out the best in everyone.

Professor Thomas J. O’Keefe will live on in the hearts and minds of thousands of students, and all of his family, friends, and colleagues at MSM/UMR/MST.
MSE’s most effective recruiting tool is the Materials Camp that is held each summer. This is very similar to the former Jackling Institute which was established in the early 70’s. The camp is directed by Professors Ron Kohser & Mary Reidmeyer. This year 48 junior/senior high school students from all across the United States participated. As seen in the accompanying pictures, activities included:

- Lectures
- Field trips to St. Louis & the Rolla Industrial Park
- Student projects
- "Walk-on-Water"
- Tours and Demos

Materials Camps is totally FREE to the students!

**FEF College Industry Conference**

FEF held its 60th annual College Industry Conference (CIC) at the Drake Hotel in Chicago last fall, bringing together 315 industry executives, student delegates, key professors and university administrators. The conference began on Thursday, November 8, with the Industry Information Session which gave 100 student delegates the opportunity to interact with representatives of 40 companies in the metal casting industry. The Information Session and social time before and after the event is structured to facilitate the sharing of job opportunities and to connect students to potential employers in the industry.

This year’s Awards Banquet theme was FEF’s 60th Anniversary, and amongst the many awards which were given out two Missouri S&T students were honored: Ryan Eller received the Karl R. Loper Scholarship, and Albert Wilkinson received the Robert V. Wolf Memorial Scholarship. Professor Von Richards is a FEF Key Professor, and helps make sure our students always are in the hunt for CIC and FEF scholarships and awards!

**Professor Van Aken Publishes New Book!**

Reporting Results, published by Cambridge University Press

An ideal guide for science and engineering students and professionals to help them communicate technical information clearly, accurately, and effectively.

Buy several copies – they make great Christmas gifts!
Enrollment Continues to Grow

As the accompanying graph shows, enrollment in CerE and MetE continues to grow. On the first day of classes MSE had:
- ✦ 169 undergrad students: (97 Met / 72 Cer):
  - 37 freshmen
- ✦ 64 graduate students (21 Met / 18 Cer / 25 MSE)

With 17 faculty members this translates to an undergraduate student: faculty ratio ≈10:1. Success is largely due to aggressive recruitment activities, the amount of endowed scholarships (MSE gave out nearly $300K to the undergraduates), and supporting the student groups to participate in outreach activities. Considering that the number of job opportunities for our students continues to climb, MSE could use ≈20% more students to satisfy market demand.

Mines & Metallurgy Academy Undergraduate Equipment Fund

Prominent alumni from the disciplines of the former School of Mines and Metallurgy belong to the Mines & Metallurgy Academy. This group of alumni meets twice a year for many reasons including reviewing our academic programs, providing resources (time and money) to the departments, nominating new members, and recognizing outstanding seniors - the Academy Scholars. With the restructuring of the university the Academy has become directly involved in insuring the viability of our home departments. What greater role could you imagine for an Academy than helping students succeed? It’s the ultimate way to carry on a tradition that has long heralded the alumni of MSM. In the fall of 2007 the chairmen gave the Academy key information about critical challenges facing the departments related to the recruitment, education and placement of the students. In particular we let them know the critical state of our undergraduate laboratory equipment, and its potential for undermining our efforts to be ABET-accredited this year. This situation is a direct result of the state of Missouri not funding the engineering equipment bill since 1999. In fact most labs across the campus are in dire need of equipment maintenance/acquisition. Academy members stepped up to the plate, and as a result nearly $1M in new equipment was acquired for all 7 departments and is in place for the ABET site visit. The main pieces of equipment MSE received are pictured here, a Leco carbon/sulfur analyzer and Microtrac/Nanotrac system for measuring particles. The primary champion of this effort, Ted Ruppert, is a class of ‘53 graduate of the Petroleum Engineering department.
Glass Research: The Brazilian Connection

For the past three years, students and faculty members in the MSE Department have collaborated with colleagues from the Vitreous Materials Lab (LAMAV) at São Carlos University, São Carlos Brazil, on studies of the stability of iron phosphate glasses and melts. Research over the past 10-15 years, principally done at Missouri S&T and led by Prof. Delbert Day, has shown that iron phosphate glasses have an unusual combination of properties that make them outstanding candidates for hosts of radioactive wastes. The current research program, sponsored by the National Science Foundation and led by MSE Profs. Mark Schlesinger and Richard Brow, is intended to characterize the thermodynamic properties and crystallization behavior of iron phosphate melts, and to develop models for glass corrosion in aqueous environments. The research at Missouri S&T is being done by two MSE Ph.D. candidates, Melodie Schmitt and Liying Zhang, with the assistance of several undergrads in the ceramic engineering program. Dr. Luciana Ghussn, a research scientist from São Carlos University, spent six months at Missouri S&T this year, collaborating on a series of experiments to quantify iron phosphate crystallization behavior. The department also hosted a visit by Prof. Edgar Zanotto, the director of LAMAV and one of the world’s experts on glass nucleation and crystallization. In October 2008, Prof. Zanotto will return the favor by hosting the visit to his lab by Melodie and Liying where they will use techniques developed at LAMAV to quantify crystallization kinetics.

Professor Fatih Dogan’s Research Group

Professor Dogan leads a team of graduate and undergraduate students, faculty, and research professors focused on multiple projects addressing the development of electronic ceramic materials. Sponsors and research emphases include:

- **Integrated High Energy Density Ceramic Capacitors** sponsored by the Defense Advanced Research Projects Agency (DARPA).

  The ultimate goal of this research is to produce very high energy density capacitors with monitored functionality that can result in “smart” operation. The approach is to use high purity nanosized titanium dioxide powder and optimize the sintering conditions to achieve dense nanocrystalline dielectrics with high permittivity and very high breakdown strength. Co-PI’s: Harlan Anderson, Keith Corzine (EE)

- **Unconventional Dielectric Materials and Structures for Ultra-high Performance Pulsed Power Capacitors** sponsored by the Office of Naval Research (ONR).

  The goal of this multi-university research initiative with Penn State and Northwestern is to implement unconventional materials phenomena and synthetic approaches to realize ultra-high energy storage materials in organic, oxide, and organic/inorganic nanocomposite materials. The scientific foundations are being established for a 10x or greater increase in performance of pulse discharge capacitors over the current state-of-the-art.

- **Center for Dielectric Studies**, a National Science Foundation Multi-university Industry/University Cooperative Research Center with Penn State.

  The Center for Dielectric Studies (CDS) plays a leadership role in the development of next generation electronic components and in the creation of scientific training opportunities; to advance the understanding of materials in devices. It contributes to the advancement of passive components through the creation of new materials, new processing methods, high frequency device modeling, measurements, interfacial characterization, and the prototyping of more highly integrated devices. Through the involvement of graduate students and postdoctoral researchers, as well as interaction with visiting industrial scientists, the Center advances the education of individuals, enriching industry's human resources.

MSE Faculty Lead the Campus in Productivity

The foundation of any successful organization is the quality of the people, and MSE is particularly blessed with outstanding students, staff and faculty. As a “small” department on campus we can maintain a family-styled atmosphere, which is great for helping students achieve their dreams. Currently our undergraduate student:faculty ratio is ≈10:1. Of course financially this doesn’t pay the bills, yet MSE faculty have always maintained a high degree of research productivity to justify the department’s existence. A few AY 07-08 facts about our faculty:

- Over past four years, obtained more ‘Outstanding Teaching Awards’ and Faculty Excellence Awards than any department on campus
- On average generated $392K in research expenditures (1st on campus)
- MSE total research expenditures: $6.68M (1st on campus)
- Total indirects generated: $1.25M (1st on campus)
- On average received $422K in new proposals awarded (1st on campus)
The glory hole and 50 lb furnace in Fulton Hall.

Dick Brow presenting a plaque to Delbert and Shirley Day in recognition of the financial support of MoSCI corporation.

Various glass articles produced by the students of MSE.

On December 7, 2007 the MSE department opened a new Hot Glass Shop in Fulton Hall. Many individuals worked hard to make this dream a reality, primarily Professors Dick Brow, Jeff Smith and Mary Reidmeyer. This facility has become immensely popular as a tour stop and as a recruiting tool. The financial help of MoSCI corporation and equipment donations of Emhardt Glass, MORCO and Cedrus corporation is sincerely appreciated.

After three years of effort MSE faculty were successful in attracting funding from the National Science Foundation to purchase a new FIB system. In addition to normal SEM and quantitative analysis capabilities, this system is capable of either depositing or machining materials at the nanoscale - it’s a nano machine shop! The Missouri S&T logo is only 15 µm wide - one-fifth the diameter of a human hair. This facility is a necessity to keep our students and faculty on the cutting edge of materials science research. Hats off to Scott Miller for leading the team of faculty who acquired the funding, and to Benet Labs for providing critical matching funds.

Welcome to the Department Dr. Lifeng Zhang

Metallurgical Engineering is pleased to announce that Dr. Lifeng Zhang joined the faculty ranks in December 2007. Lifeng “replaces” Professor David Robertson who retired in December (see previous article). Lifeng brings extensive worldwide experience to the department, with research and teaching interests in primary production, refining, continuous casting, recycling, computational fluid dynamics, and modeling of metallurgical processes. He received his Ph.D. in Metallurgy from the University of Science and Technology in Beijing, and his B.S. in Metallurgical and Materials Engineering, from Chongqing University. Prior to his appointment at S&T he was a Professor at the Norwegian University of Science and Technology, a Research Associate at the University of Illinois, and held postdoctoral positions at the University of Clausthal in Germany, and Tohoku University in Japan. He is the author of over 100 publications.

As Americans continue to live longer and demand a high quality of life, they will increasingly require treatments that address the challenges of inherited diseases, the ravages of infectious diseases, craniofacial, oral, and dental trauma, and many other chronic disabling conditions. There is a pressing need to research and develop advanced biomaterials, biosensors, and biointerfaces that can repair, replace and actually regenerate traumatized bone and tissues.

To address this need, in January 2008 Missouri S&T created the Center for Bone and Tissue Repair and Regeneration (CBTRR), directed by Dr. Len Rahaman. This center is an outgrowth of an existing consortium with UMKC that builds upon the considerable strengths of S&T in biomaterials, materials science and engineering, and the engineering disciplines, and UMKC in biomaterials, biological systems, and clinical expertise. For instance, radioactive glass microspheres, sold under the trade name ‘TheraSphere’ have opened an entirely new avenue for treating patients with inoperable liver cancer by safely delivering doses of localized beta radiation that are impossible to deliver safely by other methods.
Rackers and Baumann named Mines and Metallurgy Academy Scholars

The Mines & Metallurgy Academy Scholar program recognizes undergraduates in the graduating class who show particular promise as future leaders and contributors to their profession. The award consists of a cash award and an engraved watch. Each degree program in Mines & Metallurgy can submit one undergraduate nominee to the Academy Scholar Committee for consideration - our nominees were selected by Materials Advantage and the ASM student groups. The criteria for this award are open, but the nominee is recognized as the best rounded and most promising member of the graduating class. Characteristics such as leadership, extra-curricular activities, work ethic, background history, etc. are just as important as grades. We are proud to let you know that Kyle Rackers, Metallurgical Engineering, and Julie Baumann, Ceramic Engineering, were named Academy Scholars at the spring meeting of the Mines and Metallurgy Academy.

May 2008 Commencement Professional Degree recipients

Benjamin P. Winter is the Chief Engineer for the Minivan Product Team at Chrysler. He is a 1980 UMR alumnus of Metallurgical Engineering (B.S.), and received M.S. and Ph.D. degrees in MetE in ’82 and ’85 from the University of Michigan. Ben just joined Chrysler in January after spending 22 years with Ford Motor Company where he was a Chief Nameplate Engineer for the Taurus, Taurus X, and the Mercury Sable platform team. He is a proven technical and business leader in the highly competitive automotive industry. At Ford he directed several $1+ billion product programs from concept through launch, including the award-winning Taurus X and Milan platforms. These vehicles have won numerous safety and quality awards, including IIHS Top Safety Pick, and Family Car of the Year awards. Samuel D. Conzone received his Ph.D. and M.S. degrees in Ceramic Engineering from UMR in 1999 and 1996, and his B.S. in Ceramic Engineering from Alfred University in 1994. He recently joined Momentive Performance Materials located in Cleveland, OH as the Global Technology Manager. Prior to this position Sam was the Director of Research and Development for Schott, North America. In graduate school Sam and Dr. Delbert Day developed a non-uniform dissolution technique whereby a solid glass can be converted into a highly porous (>90%) material that remains the same size as the original glass (template), but achieves extremely high (>200 m²/g) specific surface area and chemical versatility. This technique is currently under investigation by SCHOTT, MoSci and others for applications ranging from biomaterials to catalysis and filtration. Fifteen patents resulted from his Ph.D. research, and the university receives royalty income from them. He received the Distinguished Young Alumnus Award from UMR in 2004, and was recognized as a member of the “40 under 40 group” of UMR Alumnus in recognition of his accomplishments at that time.

Goodbye to Rebecca Hester, and Welcome our new Senior Secretary – Carol Brown

In July our former senior secretary, Rebecca Hester, took a position with the Cuba High School teaching business classes. We always knew that Becka had untapped talents, and would ultimately find a career more closely aligned with her business degree. Be happy for her, and sad for us! She will be missed by all. Becka has been in contact with us, and we know she is doing well although she is teaching five different classes. Wow.

On the positive side Carol Brown joined our department on September 8, 2008 and immediately became immersed in the flurry of activities. Having worked in a community college a number of years ago and moving from Farmington to Cuba, MO to be near family this summer, she applied for the opening in our department. We are so glad she did!

Carol was an internal audit supervisor at Centene Corporation for the past 6½ years. Her attitude, skills, work experience, friendly and positive attitude is a perfect fit for MSE.
2008 Extraction & Processing Education Resource Award

Mark Schlesinger
Professor of Metallurgical Engineering

Received two awards in May at CastExpo ‘08:
AFS Award of Scientific Merit
“For accomplishments in research and other scientific endeavors in support of the American Foundry Society, along with past and continuing interest in encouraging students towards a future in the metalcasting industry”
AFS Best Paper Award
“Age Strengthening of Gray Iron - Kinetics Study”
Co-authors: D. Van Aken and S. Lekakh

2008 J. Keith Brimacombe Memorial Lecturer
Pittsburgh, PA
May 5, 2008

“Opportunities and Challenges in Steel Manufacturing - Engineering a Brighter Future”

Kent Peaslee
F. Kenneth Iverson Chair of Steelmaking Technology
Professor of Metallurgical Engineering

Fellow of the American Ceramic Society

Bill Fahrenholtz
Professor of Ceramic Engineering

Fellow of the American Ceramic Society & Missouri S&T 2008 Recruitment and Retention Award

Wayne Huebner
Chairman

2008 Extraction & Processing Education Resource Award

Dave Robertson
Professor Emeritus of Metallurgical Engineering
Missouri S&T 2008 Outstanding Faculty Advisor Award

Ron Kohser
Professor of Metallurgical Engineering

2008 Arthur L. Friedberg Award and Memorial Lecturer
MS&T, Pittsburgh, October 7, 2008

Harlan U. Anderson
Curators' Professor Emeritus of Ceramic Engineering

Missouri S&T Faculty Excellence Awards

Bill Fahrenholtz
Greg Hilmas
Rajiv Mishra
Matt O'Keefe
Jeff Smith

Missouri S&T Teaching Awards

Greg Hilmas
Scott Miller
Jeff Smith
Dave Van Aken

2008 AIST Environmental Technology Award for Best Paper
Hank Rawlins, Simon Lekakh, Von Richards and Kent Peaslee, “The Use of Steelmaking Slag for Mineralogical Sequestration of Carbon Dioxide – Aqueous Processing.”

Dr. Jeffrey Wadsworth delivers the Nineteenth A. Frank Golick Lectureship on March 5-6, 2008

Dr. Jeffrey Wadsworth, Executive Vice President, Global Laboratory Operations for the Battelle Memorial Institute was selected as the Nineteenth A. Frank Golick Lecturer. Dr. Wadsworth presented two entertaining and informative lectures, “Three Puzzles in Materials Science,” and “The History of Genuine Damascus Steels- and Attempts to Rediscover How They were Made” to packed houses in McNutt Hall. Dr. Wadsworth was educated at Sheffield University in England, where he studied metallurgy, earning a bachelor’s degree in 1972, a Ph.D. in 1975, a Doctor of Metallurgy in 1991, and received the highest recognition conferred by the university, an honorary Doctor of Engineering degree, in July 2004. From 2003 to June 2007, he was director of the Oak Ridge National Laboratory (ORNL), DOE’s largest multipurpose science laboratory, with 4,200 employees and an annual budget of more than $1 billion. Dr. Wadsworth currently leads Battelle’s Global Laboratory Operations business, where he oversees the management or co-management of six U.S. Department of Energy national laboratories representing over $3B of annual business: Pacific Northwest National Laboratory, Brookhaven National Laboratory, National Renewable Energy Laboratory, Oak Ridge National Laboratory, Idaho National Laboratory and Lawrence Livermore National Laboratory; and one national laboratory for the Department of Homeland Security, the National Biodefense Analysis and Countermeasures Center. He has authored or co-authored more than 280 papers, one book, and four U.S. patents. His many honors include two honorary Doctorates and election to the rank of Fellow of AMS, TMS, and AAAS. In 2005, he was elected a member of the National Academy of Engineering for “research on high temperature materials, superplasticity, and ancient steels and for leadership in national defense and science programs.”