Please write to us! We want to know where life has taken you since you left West Virginia University. Complete and return this form with your news and comments. Also, pass this Newsletter on, or let us know any alumni who are not receiving The Major.

Send to:
Department of Chemical Engineering • West Virginia University
403 ESB, PO Box 6102 • Morgantown, WV 26506-6102

Or, email updates to linda.rogers@mail.wvu.edu.

Name: ____________________________________________
Degree(s): _______________________________ Year ________
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Business Phone _______________________________________
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Brief News of Professional and Family Activities for Future Newsletters: _________________________________________
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For more information, visit our Department web site at www.che.cemr.wvu.edu
On October 11, 2010, WVU President James P. Clements unveiled the University’s strategic plan for the next decade. A key element of this plan is to excel in research, creativity, and innovation. The goals of the plan are to enhance scholarly activity and research, to grow and improve graduate education programs and their linkage to the research enterprise, and to establish a research infrastructure. The plan will require an investment in the hiring of high-quality faculty who are committed to research success in targeted areas within the institution.

Our Department has always taken pride in our graduate research programs, which have had a strong economic development component aimed at raising the quality of life in the state. In this regard, Quantex Energy, Inc., of Canada, and New Hope Corporation Ltd, of Australia, announced plans in September to commercialize, under license, the patented coal-to-liquid technology developed by the carbon products group in the Department.

The new process, wherein coal is dissolved and not gasified, is cheaper than competing processes and does not emit carbon dioxide. The companies are hoping to produce up to 50,000 barrels of synthetic oil per day in up to three different demonstration facilities. This development represents the successful culmination of a long journey initiated by Professor Al Stiller, Professor John Zondlo, Mr. Elliot Kennel, Dr. Peter Stansberry (now with GrafTech International), and their research associates, post-doctoral fellows, and graduate and undergraduate students. Please join me in congratulating them and in wishing them success in this new and exciting phase of their research program.

Inculcating a culture of research must be done at all levels, in all programs, and at all times. In the Department, our goal is to make a research project available to each undergraduate student. Even freshmen are involved in research. Sara Swanson, a Bucklew scholar and now a sophomore, was one of only ten WVU students chosen, in a competitive process, to present a research poster at the STA Symposium at the end of September on the campus of Marshall University. Sara did her research as a freshman under the supervision of Dr. Dinu.

In other successes, Alan Campbell, a senior, received the National Consortium for Measurement and Signature Intelligence Research (NCMR) award. The NCMR scholars program provides a $10,000 grant for tuition, books, room, and board; the grant is administered by the National Science Foundation. Alan conducted research this year as part of the Summer Undergraduate Research Experience (SURE), and his poster won the only award in the Nanoscience category at the SURE Symposium at WVU.

Most recently, eight of our undergraduates traveled to Salt Lake City, and seven of them presented posters at the annual meeting of AIChE. Tommy Sobray won third place in the “Catalysis and Reaction Engineering” portion of the poster competition for his entry entitled, “Stabilization of Enzymes onto Nanosupports of Carbon.” Several other students have been chosen to participate in the Undergraduate Research Day at the Capitol, held each year in January at the State Capitol in Charleston, West Virginia.

In addition to undergraduate research, we also emphasize study abroad and co-op education. This gives our students a competitive advantage when it comes to seeking permanent employment or graduate research assistantships.

In view of these activities and the personalized education that we provide to all students, it is not surprising that a disproportionate number of Bucklew Scholars express interest in chemical engineering. WVU typically awards twenty such scholarships each year to the
Chair's message...

state’s top-performing high school seniors. The scholarship is named in honor of Neil S. Bucklew, WVU’s 20th president, and is valued at more than $26,000 over a four-year period. This year five of the WVU’s twenty Bucklew scholars indicated that they were planning to major in chemical engineering.

When these students place their trust in us, it is our responsibility to ensure that they not only get a great education but that their career continues on an upward trajectory. One indication that we are succeeding in this endeavor is the proportion of seniors who graduate cum laude, magna cum laude, and summa cum laude from our program.

In 2009, we spent a significant amount of time preparing for a review of the chemical engineering program for purposes of reaccreditation. This is a voluntary, peer-reviewed process that requires programs to undergo comprehensive, periodic evaluations that focus on program curricula, faculty, facilities, and institutional support. The accreditation visit took place in October 2009, and, in late summer of this year, the BS program in chemical engineering received full ABET accreditation.

One of the key elements of ABET accreditation is the requirement that programs continuously improve the quality of education provided. I thank all of you who give so generously of your time and money to help us accomplish this important goal.

After long years of service to the Department and the University, Professor Eung Ha Cho retired at the end of the spring semester and Professor Al Stiller is retiring at the end of the fall semester. Both of them will remain active in research, and both plan to continue supervising graduate students. We wish them a very productive retirement! A search has been initiated to hire a new faculty member. The specified research area is one of regenerative medicine, drug delivery, and therapeutics. The new hire will contribute to a biomedical engineering degree program in the future.

In a related development, I am happy to let you know that we will be initiating a Mylan Seminar in the fall of 2011 with financial support from Mylan Technologies. This seminar will be given by a distinguished lecturer and will focus on the life sciences. It is activities such as these that help us to maintain visibility and recognition in the chemical engineering community.

I wish you all happy holidays and a very happy new year!

Rakesh Gupta, Chair
WVU Department of Chemical Engineering

DEPARTMENT NEWS

Faculty News

Dr. Alfred H. Stiller has announced his plan to retire from the Department at the end of December 2010. Al has been a faculty member in the Department since 1981 and has received numerous awards and recognitions. Dr. Stiller will continue to be active in research as he continues working with the carbon products group and mentoring his graduate students. As a result of Dr. Stiller’s retirement plans, the Department has been given permission to hire a new faculty member. A search is currently underway, and we hope to have a new faculty member on board by August 2011.

Dr. David Klinke will receive a CAREER Award from the National Science Foundation in the NSF Biotechnology, Biochemical, and Biomass Engineering Program in the Chemical, Environmental, Bioengineering, and Transport Systems Division. This award will provide $400,000 in funding for Dr. Klinke’s research program. Congratulations!

ChE Visiting Committee

The Departmental Visiting Committee met on October 6-7, 2010, for its annual meeting. The following members were present and provided valuable advice and counsel to the Department:

Dr. Steven Alford, Milliken and Company
Dr. Steven Auvil, Air Products and Chemicals, Inc.
Dr. Kevin DiGregorio, Chemical Alliance Zone & WV TBED
Dr. George Keller, MATRIC
Dr. Kenneth Miller, Mylan, Inc.
Dr. Valerie Patrick, Bayer Corporation
Dr. Geo Richards, U.S. Dept of Energy/NETL
Mr. Vince Stricker, Dow Chemical Company
Ms. R. Ingrid Warren, Momentive Performance Materials

Drs. Sadhan Jana from the University of Akron and Raymond Page from CellThera, Inc., were unable to attend the meeting this year do to scheduling conflicts.

REMINDER

For those who have sent contributions to the Department this past year, OUR MANY THANKS!! These funds are used to support many undergraduate and graduate activities, and to help enhance the overall academic and learning environments in the Department. Your support is greatly appreciated.

Please remember to designate your tax deductible gifts for use by the Department. The best way for contributing to support of WVU Chemical Engineering is to write your check out to the WVU Foundation and designate it for use by Chemical Engineering on the memo line. Also, please check with your company – many will provide matching gifts.

Winter 2010
Dow/Union Carbide-WVU Chemical Engineering Seminar Series Honoring R. Richard Bannister

On October 15, 2010, Dr. Wei-Shou Hu presented the Dow/Union Carbide Reaction Engineering and Catalysis Seminar honoring R. Richard Bannister. The seminar was entitled “Reaction Engineering Classics in Cellular Engineering and Stem Cell Biotechnology.”

Dr. Hu received a B.S. from National Taiwan University in agricultural chemistry, a S.M. and a Ph.D. in biochemical engineering from Massachusetts Institute of Technology. He joined the Department of Chemical Engineering and Materials Science at the University of Minnesota upon receiving his Ph.D., where he is now a Distinguished McKnight University Professor.

Dr. Hu’s current research efforts emphasize exploiting genomics and proteomics in advancing scientific exploration, and applying systems analysis to generate new understanding of gene expression regulation.

For his contribution to cell culture engineering, he received the inaugural Merck Award on cell culture engineering and the Lifetime Achievement Award from the Society of In Vitro Biology. He was also further recognized for his contributions by receiving the Marvin Johnson Award from the Biochemical Technology Division of ACS, the distinguished service award of the Society of Biological Engineers, a special award from Asia Pacific Biochemical Engineering Conference, and both the distinguished service award and Division award from the Division of Food, Pharmaceuticals, and Bioengineering of the American Institute of Chemical Engineers.

COLLEGE NEWS
ABET Accreditation

CEMR received ABET accreditation in Aerospace Engineering (BS); Chemical Engineering (BS); Civil Engineering (BS); Computer Engineering (BS); Electrical Engineering (BS); Industrial Engineering (BS); Mechanical Engineering (BS); Mining Engineering (BS); Petroleum and Natural Gas Engineering (BS); Safety Management (MS) and Industrial Hygiene (MS). Congratulations to all of the degree programs for a job well done!

WVU Engineering Ranked Amongst the Top 25

According to a poll in a Wall Street Journal survey, employers ranked WVU 23rd for engineering. WVU is among the top schools for producing graduates best prepared to enter the workforce. Overall, WVU was listed in the report’s “Next 20”, an unranked addition to its Top 25 list. The study received surveys from 479 of the nation’s largest public and private companies, nonprofits, and government agencies. Congratulations to all!

UNIVERSITY NEWS

During the State of the University Address on Monday, October 11, 2010, WVU President James P. Clements outlined the new 10-year strategic plan. The 2020 Strategic Plan highlights five goals that will help the University to become stronger over the next 10 years. The five major objectives which were outlined are: providing a challenging academic environment for undergraduate, graduate, and professional students; excelling in research creativity and innovation; fostering diversity; advancing international activity and global engagement; and enhancing the well-being and the quality of life for the people of West Virginia. Research will be the driving force in the 2020 plan.

At the beginning of the fall semester, freshmen were not the only ones finding their way around campus for the first time. According to WVU Associate Provost for Academic Personnel C.B. Wilson, 166 faculty members have been hired since last fall. Also, three new deans began work this past semester.

On June 10, 2010, President Clements named Oliver Luck, former WVU and NFL quarterback, WVU’s Director of Intercollegiate Athletics. Oliver Luck graduated from WVU in 1982 and played quarterback for the Mountaineers from 1978-1981. He was inducted into the WVU Sports Hall of Fame in 1997. Luck came to WVU via the Houston Dynamo Soccer franchise, where he was the president and general manager.
Recent Graduates

The Department has 123 undergraduate students enrolled for the fall 2010 semester in the sophomore through senior years. This past May, we graduated nine students with a B.S. degree.

The BSChE graduates for 2009-2010 are shown below. Our congratulations and best wishes to all of them in their careers! Please keep in touch!

CLASS OF 2010
August 2009
Bryan Reyes

May 2010
Elizabeth Emma DeFusco
Godwin Akpewue Erekaife
Emmanuel Joshua Fernandez
Jennifer Marie Knipe***
Logan Gregory May

*Cum Laude   **Magna Cum Laude  ***Summa Cum Laude

If your company is hiring, please let us know. We are always interested in providing more opportunities for our graduates.

Enrollment

In 2010-2011 the Department has 26 full-time graduate students enrolled, of whom 11 are in the Ph.D. program. We graduated eight M.S. students and one Ph.D. student during this academic year. Their names, research topics, and research advisors are as follows:

August 2009
Saurabh Batra (MS)
Research Advisor: Ray Liang
“Creep Rupture and Life Prediction of Polymer Composites”

May 2010
Elizabeth Emma DeFusco
Godwin Akpewue Erekaife
Emmanuel Joshua Fernandez
Jennifer Marie Knipe***
Logan Gregory May
Patricia Jean Sefton*
Erica Kristen Sladky*
John-Markwell Snodgrass
Joseph Thomas Widmeyer**

*Cum Laude   **Magna Cum Laude  ***Summa Cum Laude

If your company is hiring, please let us know. We are always interested in providing more opportunities for our graduates.

Zachary Mayes Stands Out as Milliken Intern

This past summer Zachary Mayes ('11) held an internship at Milliken and Company. Steve Alford ('87), corporate director of LEAN at Milliken, provided the following comments:

“Zachary Mayes had a fantastic summer as intern with Milliken and Company. He spent the summer working on the number one internal and external quality issue affecting our carpet tile products – shade. One of our leaders said if Zach solves tile shade uniformly, we are going to put up a statue of him out in front of the plant. Zach was not able to solve the shade but he was able to develop a strong foundation for further work as well as establish critical to quality variables that affect shade.

Zach was a definite asset to Milliken this summer with breakthroughs in understanding in several areas. The really big news is that Zach was able to pass all of the requirements for SIX SIGMA Greenbelt certification with Milliken, which includes Master Black Belt project sign-off and satisfactorily passing the certification test (minimum score 90%). He will receive all of the honors of a full-time associate. I am very proud of Zack and the quality of student that WVU is sending into industry, which is a reflection on the Department and professors.”

Abhijit Bhagavatula (MS)
Research Advisor: John Zondlo
“Hydrogenation of Naphthalene and Coal Tar Distillate Over Ni/Mo/Al2O3 Catalyst in a Trickle Bed Reactor”

Jiachun Bu (MS)
Research Advisor: John Zondlo
“Kinetic Analysis of Coal and Biomass Co-gasification With Carbon Dioxide”

Srinath C. Velaga (MS)
Research Advisor: Brian Anderson
“Phase Equilibrium and Cage Occupancy Calculations of Carbon Dioxide Hydrates Using Ab Initio Intermolecular Potentials”

December 2009
Nagasree Garapati (MS)
Research Advisor: Brian Anderson
“Determination of Mixed Hydrate Thermodynamics for Reservoir Modeling”

Gregory Hackett (PhD)
Research Advisor: John Zondlo
“Interaction of Nickel-Based SOFC Anodes With Trace Contaminants From Coal-Derived Synthesis Gas”

Sreeja Madala (MS)
Research Advisor: John Zondlo
“Adsorptive Removal of Nitrogen From Coal-Based Needle Coke Feedstocks Using Activated Carbon”

Vankata S. Vedam (MS)
Research Advisors: Brian Anderson
“Stability of Carbon Dioxide and Methane Hydrates in Water in Presence of Small Driving Forces Using MD Simulation”

May 2010
Ning Cheng (MS)
Research Advisor: David Klinke
“Identifying Signaling Cross-talk Between Cancer and Immune Cell: A Study of IL-12 Signaling in 2D6 Cells”
Scholarships Announced

In addition to the Academy scholarships, which were identified in the summer 2010 edition of the Chemical Engineering newsletter, The Major, the following scholarships were awarded for the 2010-2011 academic year:

Jordan Beilhart (’11), Chemical Engineering Scholarship, Dow Chemical Scholarship
Sandra Bruce (’11), Williard W. Hodge Chemical Engineering Scholarship
Matthew Brumley (’13), Chemical Engineering Scholarship, Georgia Nash Memorial Scholarship, John M. Summerfield Scholarship, George A. & Sylvia B. Crago Scholarship
Alan Campbell (’11), Chemical Engineering Scholarship, James Wimer Memorial Scholarship
Sarah Caprico (’12), Lester Kincaid Memorial Scholarship
Nicholas Carr (’11), Williard W. Hodge Chemical Engineering Scholarship
Michael Castle (’12), Lester Kincaid Memorial Scholarship
Amanda DeFusco (’11), Lester Kincaid Memorial Scholarship
Zachary Easterly (’12), Williard W. Hodge Chemical Engineering Scholarship
Andrew Gilbert (’12), Williard W. Hodge Chemical Engineering Scholarship
Andrew Graves (’11), Lester Kincaid Memorial Scholarship
Robert Guy (’13), Albert J. Monack Scholarship
Jordan Holliday (’13), Williard W. Hodge Chemical Engineering Scholarship
Kristen Kief (’11), Williard W. Hodge Chemical Engineering Scholarship
Sarah Lazur (’12), Lester Kincaid Memorial Scholarship
Eugene Lewis (’12), Lester Kincaid Memorial Scholarship
Joshua Long (’13), Williard W. Hodge Chemical Engineering Scholarship
Garrett Maner (’12), Georgia Nash Memorial Scholarship
Zachary Mayes (’11), Williard W. Hodge Chemical Engineering Scholarship
Audrey Romberger (’12), Williard W. Hodge Chemical Engineering Scholarship
Alysia Salva (’12), Williard W. Hodge Chemical Engineering Scholarship
Lincoln Schaefer (’12), Lester Kincaid Memorial Scholarship
Mason Smith (’13), Williard W. Hodge Chemical Engineering Scholarship
Thomas Sobray (’11), Georgia Nash Memorial Scholarship
Douglas Teter (’12), Georgia Nash Memorial Scholarship
Jason Ware (’12), Lester Kincaid Memorial Scholarship

A.M.A.D.EY NEWS

Plans are underway for the next annual Academy of Chemical Engineers meeting and banquet to be held on April 15, 2011. Academy nomination of new members will be underway shortly. Potential members must have graduated at least fifteen years before they are considered eligible for election. If you know of any alumni deserving of such recognition, please let us know. Your input is appreciated.

Verl O. Purdy (’64) was elected chairman of the WVU Foundation Board of Directors. Verl has been a member of the WVU Foundation Board since 2004.

Also, William “Billy” McCartney Jr. (’95) was named a member of the WVU Foundation Board of Directors and will be serving a three-year term. Billy, of Houston, Texas, is a partner and energy trader with Vitol Capital management, where he currently manages a crude oil and natural gas derivatives portfolio.

William M. Smith Scholarship

In the summer 2010 edition of The Major, we made note of the passing of William M. Smith on October 26, 2009. Bill’s wife Ann and his daughter, Jennifer, have pledged $10,000 to the WVU Foundation to provide a $1,000/year scholarship for qualified students for the next ten years. The first William M. Smith scholarship will be awarded for the 2011-2012 academic year. A special thank you to Ann and Jennifer Smith.
ALUMNI CORNER

Alumnus Receives MATRIC Star Employee Award

David Statler, who received his Ph.D. in chemical engineering from WVU in 2008, recently received the 2010 Mid-Atlantic Technology, Research and Innovation Center’s (MATRIC) Star Employee award in the area of Chemical and Environmental Technologies.

Statler graduated from West Virginia University Institute of Technology with a chemical engineering degree in 2003 before coming to WVU for his doctoral studies. “Dr. Statler won numerous research awards during the course of his Ph.D. work,” said Rakesh Gupta, department chair. “His designation as a MATRIC Star shows that he is continuing to progress in an upward trajectory.”

After receiving his Ph.D., Dr. Statler was hired as a research chemical engineer at MATRIC. He is the lead engineer and project manager who supports development of sulfur dioxide recovery technologies, and he works on projects that support polymer development and biodiesel pilot plant operations.

The Mid-Atlantic Technology, Research and Innovation Center (MATRIC) is an independent, nonprofit, corporation headquartered in West Virginia.

Make a Difference in the Lives That Follow

Because of the breadth and scope of their professional expertise, chemical engineers have been described as “universal engineers.” Assuring top-notch educational opportunities at WVU for our bachelor’s, master’s, and doctoral students is definitely the Department of Chemical Engineering’s ongoing mission.

As many appreciate, private support plays an increasingly important role in furthering the department’s degree and research programs. An easy way to provide an educational legacy and to help students of the future is to include a gift provision in your will or revocable trust. The wording of “to the West Virginia University Foundation, Inc. for the benefit of the College of Engineering and Mineral Resources’ Department of Chemical Engineering” will accomplish that.

Undergraduate scholarships, research support for graduate students, and undergraduate conference/travel funds are top Department priorities.

Establishing an endowed (permanent) account for a scholarship or conference/travel purposes requires a gift of $25,000 or more. Remember, the greater the gift, the greater its impact. For graduate student support, a fund of $50,000 or more is appropriate.

For a number of reasons, the cost of a quality education is continually rising, but no one doubts the resulting benefits. To learn more about how you can help our Department, contact Dawn Sandone, development director, at 304-293-4036 or Dawn.Sandone@mail.wvu.edu.

SPORTS

According to a press release from WVU Today, Morgantown is named among “America’s Top College Football Towns.” As a result of Morgantown’s dedication to the Mountaineers and all things gold and blue, Morgantown was also listed as one of eight “America’s Top College Football Towns” by Budget Travel.

WVU Basketball

By the time you receive this newsletter, basketball season will be well underway. This year WVU’s men’s games against Pittsburgh (February 7) and Syracuse (February 14) will be featured on ESPN’s Big Monday. At least 16 regular season games will be on national television and two games on CBS (Purdue and Notre Dame). Big East tournament play starts on March 8 and will be televised on either ESPN or ESPN2. Let’s see if we can make it back to the Final Four! Go Mountaineers!!

The Lady Mountaineers will have seven games on national television, the second-most in the Big East, including ESPN2 Big Monday and February Frenzy games. Televised games are Georgetown (January 25), DePaul (January 30), Pittsburgh (February 5), Connecticut (February 8), Louisville (February 13), Notre Dame (February 22) and St. John’s (February 28). The women should do very well this year, having a senior-laden team with experience. The ladies opened the regular season on November 12, hosting Loyola Maryland. Big East tournament play starts March 4.

IN MEMORIAM

William “Bill” Carney passed away September 7, 2010, at the age of 87. Bill was a native of Wheeling, West Virginia. He graduated from WVU with a BS (’44), MS (’51) and PhD (’54) in chemical engineering. Bill worked for the Goodyear Tire and Rubber Company in Akron, Ohio, for 34 years, retiring in 1987 as manager of polyester research.

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www.twitter.com/WVUCEMR
www.cemer.wvu.edu/linkedInWvucemr
www.youtube.com/WVUCEMR
Our Class Notes section is rather sparse for this newsletter. Please write to us and let us know how and what you are doing. We appreciate your input.

1958
Harvey B. Louderback II (BS) worked for E.I. DuPont DeNemours and Company for 34 years in plant engineering, safety and operations management capacities, plus sales and sales management. For the past 18 years he has worked as a consultant in process safety. Harvey resides in Kingwood, Texas. Harvey indicated that he “might be interested in providing senior chemical engineering students process safety management concepts. Maybe this could avoid the type of incident like BP Texas City, et. al.”

Don Graham (BS) has been retired for 10 years from a USA-European career in environmental. Don currently lives on his farm in Fort Ashby, West Virginia. He has three sons; one is an engineer.

1989
Jeff White (BS) is employed by Braskem PP Americas as the manager-investment and automation. Jeff recently received his project management professional certification. Jeff resides in Media, Pennsylvania.

1993
Renu Chakrabarty (BS) is the Air Toxics Coordinator for WV DEP, Division of Air Quality in Charleston, West Virginia.

2000
Jeffrey Shields (BS) has been appointed to a new role as the manufacturing technology supervisor for DuPont’s Washington Works West End. In his new role, he will be accountable for driving improvement work within the West End, as well as working to improve the capabilities of the Manufacturing Technology Organization. Congratulations to Jeff!

2003
Judson Bandry (BS) earned an MBA from Kent State University in 2005. He is working extensively in both quality and safety roles, earning his Associate Safety Professional (ASP) designation. Once he has sufficient field experience accumulated, he will receive both a CSP and CQE (certified quality engineer). He is currently working in the seating division of Magna International as a quality engineer. The facility builds car seats for Ford.

2006
Jacobs Lyons (BS) recently accepted a position as compliance engineer for EOT in Pittsburgh.

2007
Tirzah (Mills) Glebes (BS) is currently doing an internship at E J Gallo in California. She is working in the fermentation group.

2008