



Gupta

## MESSAGE FROM THE CHAIR

Change is finally and truly upon us! For some time we have been searching for an individual to be the first endowed Statler Chair and to lead the University's effort in the area of shale gas utilization. We also secured permission to recruit a new faculty member to serve as the director of our biomedical engineering degree program. Interviews to identify the most appropriate people are ongoing. Most recently, professors Dady Dadyburjor and Edwin Kugler announced their intention to retire at the end of the spring 2015 semester. In view of this, a faculty committee was formed to identify which research areas should receive investment. The areas identified include energy and materials. Permission was received to recruit additional faculty in these areas, and advertisements were placed in early fall 2014. Several candidates have been short-listed, and interviews will be conducted soon. We anticipate having so many visitors that all the slots in the Departmental seminar series for the current semester are being used for on-campus faculty interviews.

Brian Anderson, who was on sabbatical during 2013-14, returned to WVU and briefly accepted a part-time appointment as coordinator of strategic research in energy for the WVU Research Office. In early fall 2014, he was named director of the newly created WVU Energy Institute; this is a full-time position, but Dr. Anderson will continue to supervise graduate students and conduct research in the Department. The Institute will

connect WVU's existing energy efforts and respond to new opportunities. In other faculty news, Richard Turton, currently chair-elect of the WVU Faculty Senate, will assume the position of chair in July 2015. As a result, he will be reducing his involvement in Departmental activities during the next academic year. These changes have left us shorthanded as far as teaching is concerned, and we are likely to look for temporary teaching help for the next year or two. In staff news, Bonnie Helmick, who had served the Department for the last 17 years out of her 30 years spent at WVU, retired in February 2015. The office will never be the same without her.

The biomedical engineering program started formally in fall 2013, and we currently have 19 sophomores enrolled. The class of 2018, however, has the potential to be twice as large. In order to ensure that everything goes smoothly, Robin Hissam has been appointed associate department chair in charge of biomedical engineering. She is responsible for advising all BMEG students, in addition to teaching some of the key courses. The Department Visiting Committee now has several members with expertise in biomedical engineering, and these include Yu-Li Wang, head of biomedical engineering at Carnegie Mellon University, and Sanjeev Shroff, the chair of bioengineering at the University of Pittsburgh. We are very thankful to the VC members for their constant help and advice.

It has been more than five years since the last accreditation visit, and an ABET team will be on campus in fall 2015. We have begun preparations for the visit, and a College leadership team has been working under the direction of Associate Dean Warren Myers. The websites of each Department have been given a new look, necessary program information has been made available on the website and the self-study document is being prepared. The efforts within the department are being led by Dr. Hissam, who recently participated in ABET workshops.

Once the ABET visit is behind us, current plans call for chemical engineering to temporarily move to the third floor of the Engineering Sciences Building, presently occupied by mechanical and aerospace engineering. This is because the Lane Department of Computer Science and Electrical Engineering will be moving to the new Advanced Engineering Research Building this spring. The space that is vacated by the Lane Department will be renovated and will become the new home of the MAE department. We have to move to the third floor to allow the fourth floor to be renovated. When we return to the fourth floor two-three months later, we are also likely to get some space on the fifth floor, and this will give us the ability to accommodate future growth.

The bachelor's degree program in chemical engineering at West Virginia University was initiated in 1916 as part of the Department of Mechanical

» continued on page 2

# THE MAJOR

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BENJAMIN M. STATLER COLLEGE OF ENGINEERING AND MINERAL RESOURCES  
DEPARTMENT OF CHEMICAL ENGINEERING

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**Chair's message continued from page 1...**

Engineering, and the first graduates were in 1921. In that same year, the Department of Chemical Engineering became a stand-alone entity. Plans are afoot, with help from the ChE Academy and VC, to celebrate the centennial of chemical engineering at WVU during the 2016-17 academic year. All alumni, whether from the undergraduate or the graduate programs, will be invited back for a reunion weekend at that time. If you have any suggestions for reunion activities, please write to me with your ideas. Many of our alumni are overseas, and I hope that they will join us. I recently traveled to Taipei, Taiwan, where the College hosted an Alumni Luncheon on January 31, 2015. Present were ChE alumni who had graduated between 1968 and 2008. Several of them have promised to come to Morgantown for the centennial celebration.

As has now become a tradition, six undergraduate students participated in the 2014 AIChE annual meeting in Atlanta, Georgia, and most of them presented posters on their research work. Andrew Maloney, who is working with Cerasela Dinu, won first place in the Food, Pharmaceuticals and Biotechnology III division, while Andrew Radcliffe, who is working with Fernando Lima, won third place in the Computing and Process Control I division. Several graduate students also attended and made presentations. Reem Eldawud won second place in the bionanotechnology student award session, while Yueting Wu was one of three poster award winners in the Food, Pharmaceutical and Bioengineering division. Reem's research is under the supervision of Dr. Dinu, while Yueting's dissertation supervisor is David Klinke. Such recognition is very satisfying and makes all our efforts worthwhile.

In graduate student news, Jarret Riley, who started his doctoral research in fall 2014 under the supervision of Hanjing Tian, was selected for a STEM Mountains of Excellence Fellowship by the WVU Office of Graduate Education and Life, and Jacob Albright, whose research is supervised by Debangsu Bhattacharyya, received a Statler Ph.D. Fellowship, renewable for a period of four years; he also began graduate study in fall 2014.

On September 23, we held the second Plastics Day at WVU. The main speaker was Don Rosato, CEO of PlasticSource, Inc. His lecture was entitled, "The 21st Century Plastics Age: Emerging Plastics Technologies to Watch." There was a program for Trinity Catholic School students run by the PlastiVan of the Society of Plastics Engineers, a presentation contest for WVU students about the value of plastic vs. paper packaging and a demonstration of 3-D printing by Kostas Sierros of WVU's MAE department. Graduate students Matthew Thompson, Reem Eldawud and Kelydra Welcker were the winners of the presentation contest.

In other news, alumnus James Faller (BS '59) and his wife recently gifted \$40,000 to endow the James and Catherine Faller Scholarship to provide support to undergraduate chemical engineering students with demonstrated financial need. This welcome gift was made in conjunction with "A State of Minds: The Campaign for West Virginia's University."

Several of our colleagues have been honored in the recent past. Dr. Dadyburjor was named a Fellow of the American Chemical Society. He is the first faculty member from WVU to be awarded this honor, which recognizes ACS members for outstanding achievements in and contributions to science, the profession and Society. He was earlier named a fellow of the AIChE. More recently, Dr. Anderson, who had previously been selected as a recipient of the Presidential Early Career Award for Scientists and Engineers, was invited to participate in the 2014 National Academy of Science Frontiers of Science Symposium. Most recently, Dr. Dinu received a NSF CAREER award to research "tailored metal-oxide-based heterogeneous nanointerfaces for robust electro-catalyst formation". This is the most prestigious award given to junior faculty by the NSF. Congratulations to all!

**Dr. Rakesh Gupta**

*Chair, Department of Chemical Engineering*

**DEPARTMENT NEWS****CHE INDUSTRIAL VISITING COMMITTEE**

The Departmental Industrial Visiting Committee met on October 15-16, for its annual meeting. The Biomedical Engineering Subcommittee met during the morning of October 15, and then reported back to the entire committee on October 16. The following members were present and provided valuable advice and counsel to the Department, especially as we progress with the biomedical engineering degree:

**Steven Auvil**, Air Products and Chemicals, Inc. (retired)

**Jack Dever**, MATRIC

**Kevin DiGregorio**, Chemical Alliance Zone

**Kevin Gilbert**, DuPont

**Karl W. Haider**, Bayer MaterialScience

**Linda Phinney**, Alcon

**Geo Richards**, USDOE/NETL

**Sanjeev Shroff**, Dept. of Bioengineering, University of Pittsburgh (new member)

**Vince Stricker**, W.R. Grace and Company

**Madhava Syamlal**, USDOE/NETL (new member)

Steve Alford, George Keller, Kenneth Miller, Denny Mills and Ray Page were unable to attend the meeting this year due to scheduling conflicts. The committee welcomed new members Sanjeev Shroff and Madhava Syamlal this year.

**DUPONT SEMINAR**

On Friday, October 24, Loren J. Strahm, manager, Advanced Processes for Boeing Research and Technology, presented the annual DuPont Seminar with a talk entitled, "Additive Manufacturing Polymers at Boeing." Strahm graduated from Wichita State University with a B.S. in aerospace engineering and from Washington University in St. Louis, Missouri, with an MBA. At Boeing he spent three years working as a structural design engineer in the BR&T Metals group and received many patents. He spent a year working in Huntington Beach on proprietary programs. Since returning to St. Louis, he was the HALE Empennage IPT lead and participated in designing

fuselage and wing components including the strut. He is now leading the Advanced Processes and Digital Design for Manufacturing group within BR&T. The group includes a wide gamut of technical specialties including polymeric additive manufacturing R&D, additive manufacturing as a service, structural thermoplastic R&D, tooling R&D and stitched resin infusion R&D. This seminar is made possible by the financial support of the DuPont Company.



## PLASTICS DAY

The Department of Chemical Engineering organized its second Plastics Day at WVU on September 23. Through a combination of plenary talks, STEM engagement activities for high school students and a presentation for graduate and undergraduate students, our Department helped showcase the benefits and concerns surrounding the use of plastics as well as looked for future opportunities to address their potential damaging effects on both the environment and the society.

“Plastics Day was for the recognition and celebration of the advancements resulting from the development and improvements of plastics over the last half century,” said Kelydra Welcker, a master’s degree student in chemical engineering. “The presentation on Paper vs. Plastic highlighted the growing need of a paradigm shift in how we encourage and educate the generations about production and recycling.”

“The student presentation session on Paper vs. Plastic provided an excellent chance for us to investigate the production, usage, disposal future, and environmental concerns of the paper and plastic industry. I came to think critically about the usage of plastics and their future directions and how they will affect us, the consumers, the environment around us, as well as how we can help lessen any negative impacts through future research,” said Alixandra Wagner, also a graduate student in the Department.

“The interaction with industry professionals at Plastics Day events has been immensely valuable to me for beginning and building my network and pursuing a career in the plastics and chemical engineering industries,” added Matthew Thompson, a doctoral student in the Department.

Plastics Day featured a keynote address by Donald V. Rosato, PlasticSource, Inc., entitled “The 21st Century Plastics Age: Emerging Plastics Technologies to Watch.”

Financial support for Plastics Day was provided by The Dow Chemical Company, Pickering Associates, West Virginia NASA Space Grant Consortium, Society of Plastics Engineers, Polymer Alliance Zone and the WVU Department of Chemical Engineering

**Photos: Marjorie Weiner, an outreach coordinator for PlastiVan, leads high school students from Trinity Christian School through activities that highlight the properties of plastics.**



## DEPARTMENT NEWS



## DADYBURJOR ELECTED AMERICAN CHEMICAL SOCIETY FELLOW

Dadyburjor was recently elected a Fellow of the American Chemical Society. Dadyburjor, who is the first WVU professor to be elected an ACS Fellow, was recognized for his research in catalysis and fuel production including fuels and chemicals from coal and natural gas, as well as his leadership service to the organization's Division of Petroleum Chemistry, the Division of Energy and Fuels and the Council for Chemical Research. Dadyburjor was one of 99 scientists to earn the designation in 2014 and he was honored at a special ceremony at the ACS National Meeting in San Francisco, California, on August 11. Dadyburjor is also a Fellow of the American Institute of Chemical Engineers; he joins only 17 other scientists worldwide who are Fellows of both organizations.

## UNIVERSITY NEWS

## WVU CREATES ENERGY INSTITUTE

West Virginia University has created the WVU Energy Institute to establish a powerful network of expertise in energy research and education. Brian Anderson has been selected to head the Institute, which will connect WVU's existing energy efforts and respond to new opportunities. In addition to furthering faculty research opportunities, the Institute will help WVU make connections within the University and with agencies and institutions outside it. The Energy Institute is housed in WVU's Research Office.

## ANDERSON INVITED TO 2014 NATIONAL ACADEMY OF SCIENCE FRONTIERS OF SCIENCE SYMPOSIUM

Brian Anderson was invited to participate in the 2014 National Academy of Science Frontiers of Science Symposium. Attendees were selected by a committee of Academy members from among young researchers who have already made recognized contributions to science, including recipients of major national fellowships and awards and who have been identified as future leaders in science. Since its inception in 1989, more than 170 of its alumni have been elected to the National Academy of Sciences and 10 have been awarded Nobel Prizes. The symposium was held November 17-19, in Irvine, California.



## FACULTY CORNER: DAVID KLINKE

As many of you are probably aware, the costs associated with prescription drugs are rising. These costs reflect a number of factors including the cost associated with pharmaceutical drug discovery and development. A recent study from the Tufts Center for Drug Discovery indicates that it costs around \$2.56 billion to bring a new drug to market. While the costs are high, some of these new drugs have significant clinical benefit, including for the treatment of cancer. Conventional treatment for cancer involves selecting from a combination of chemotherapy, radiation and surgery. Using the patient's own immune system to attack cancer is a strategy that pre-dates chemotherapy and radiation. However, this clinical strategy has been difficult to use reliably until recently. Recent clinical trials have shown that a particular class of protein-based drugs, called immune checkpoint inhibitors, can achieve a durable clinical response in about 10-30 percent of patients. While the initial trials focused on metastatic melanoma, a number of on-going clinical trials are testing these drugs in other cancers. However, these immune checkpoint inhibitors are some of the most expensive on the market, costing around \$250,000 per year.



In 2011, the National Institutes of Health organized an industrial and academic working group to study the challenges associated with drug discovery and development. The working group concluded that many of the current challenges, such as the high costs of R&D and low success rates in clinical trials, stem from an incomplete understanding of the biological mechanisms that are targeted by the potential drugs. They also drafted recommendations to reconnect pre-clinical drug discovery and development with human pathophysiology, which include two central themes. The first theme focuses on a network-centric view of biology as a contrast to a "one-gene, one-receptor, one-mechanism" paradigm for drug discovery and development. The network centric view encourages understanding how the complicated relationships among the many components of a biological system change in health and disease. The second theme aims to integrate mechanistic modeling and simulation with quantitative experimental studies. Similarly, chemical engineering process design students may appreciate that optimizing an isolated component of a chemical process off-line may not lead to an overall best design as the components may interact in non-intuitive ways. Moreover, capturing these process interactions and testing process scenarios is almost unthinkable without computer-aided design.

On-going work in the Klinker lab embodies many of these recommendations. Biologically, our work focuses on understanding why the majority of patients still do not receive clinical benefit from cancer immunotherapy. Specifically, we have focused on identifying ways in which cancer cells re-wire the networks of intercellular communication within tissues to create favorable environments for tumor growth. To do this, we use a combination of quantitative experiments and mathematical modeling and simulation. Using this approach, we recently identified a protein, called Wnt-inducible signaling protein 1, that is increased in essentially all invasive breast tumors, but is more commonly associated with growth and development. We believe that WISP1 is secreted by malignant cells and interferes with another protein, called Interleukin-12, which is secreted locally within a tissue to sustain a productive anti-tumor immune response. We are working with collaborators at WVU and elsewhere to translate these findings toward the clinic.

## STUDENT NEWS

STUDENTS PARTICIPATE IN  
POSTER COMPETITION AT AIChE

Six undergraduate chemical engineering students presented posters at the annual meeting of the American Institute of Chemical Engineers, which was held in Atlanta, Georgia, this past November. **Andrew Maloney** ('15) won first place in the Food, Pharmaceuticals and Biotechnology III Division with his poster, "Bionano-Enzyme Conjugates with Bacterial Decontamination Capabilities." **Andrew Radcliffe** ('15) won third place in the Computing and Process Control I Division with his poster, "Modeling, Simulation and Optimization of Polybenzimidazole Hollow Fiber-based Membrane Systems for Water-gas Shift Reaction Applications." Maloney is performing research under the direction of Cerasela Dinu and Andrew Radcliffe is doing research with Fernando Lima.

Several graduate students also attended the event. **Reem Eldawud** (PhD '16) won second place in the Seventh Annual Bionanotechnology Student Award Session. Her presentation was titled, "Electronic Platform to Quantify Cellular Mechanisms Associated with Carbon Nanotubes Exposure in Real-Time." Reem states, "Participating in the AIChE annual meeting was a very enriching and exciting experience. It introduced me to the latest advances in my research field and allowed me to meet and interact with researchers and students from world-wide universities and institutes." Reem is performing research under the direction of Cerasela Dinu.

**Yueting Wu** (PhD '15) was selected as one of three poster award winners in the graduate division of Food, Pharmaceutical and Bioengineering. The title of her poster was, "Cancer Exosomes Deliver Extracellular mRNAs to Suppress T Lymphocyte Function." Yueting is doing research under the direction of David Klinke.



## COLLEGE NEWS

2014  
EMERITUS  
CLUB  
BREAKFAST

The 2014 College Emeritus Club Breakfast was held on June 6, at 9 a.m., at the Erickson Alumni Center. John Zondlo and Rakesh Gupta played host for the Department of Chemical Engineering. Alumni in attendance from chemical engineering were:

**Kenneth Barker**, BSChE '49, MSChE '50  
**Verl Purdy**, BSChE '64  
**Betty Miller**, BSChE '47

## RECENT GRADUATES

The Department has 184 undergraduate students enrolled for fall 2014 semester in the sophomore through senior years. This past May, we graduated 36 students with a B.S. degree. The BSChE graduates for 2013-2014 are listed below. Our congratulations and best wishes to all of them in their careers! Please keep in touch!

## CLASS OF 2014

Muhammad Y. Al-Alwami  
Fidaa Alawami  
Jacob Albright  
Suliman A. Alhumaid  
Deanna Boyer  
Sean Brown  
Joshua Bullock  
Ahmed Butt

Bradley Cayo  
Benjamin M. Clark  
William I. Corathers  
John F. Cordonier  
Carl R. Fast  
J. Patrick Flora  
Neha Gupta  
Megan C. Hall

Nicholas G. Horvath  
Areej A.S. Kuzmar  
Stacey E. Ladd  
Brittany N. Lilly  
Nathaneil B.D. Littleton  
Thomas D. Loder  
Thomas M. Lyvers  
Nathan K. Mickinac

Jason Miles  
McKenzie D. Mills  
Allisyn E. Monteleone  
Paula Pacurari  
Christopher I. Prunty  
Phillip A.S. Rabanal  
Jarrett A. Riley  
Jonathan T. Smearman

Kyle D. Taylor  
Roman M. Taylor  
Ryan M. Whitehair  
Siyun Yang

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

The Department currently has 39 full-time graduate students enrolled, 30 of whom are in the Ph.D. program. We graduated one M.S. student and three Ph.D. students during the past academic year. Their names, research topics, and research advisors are as follows:

## August 2013

**Kiran P. Chaudhari** (Ph.D.)  
Research Advisor: Richard Turton  
*"Development of Carbonaceous Chemistry for Computational Modeling with Application of Uncertainty Quantification Analysis for Coal Gasification Kinetics in Computational Fluid Dynamics Modeling"*

## December 2013

**Jason T. Peluchette** (M.S.)  
Research Advisor: Brian Anderson  
*"Optimization of Integrated Reservoir, Wellbore, and Power Plant Models for Enhanced Geothermal Systems"*

## May 2014

**Manohar Gaddipati** (Ph.D.)  
Research Advisor: Brian Anderson  
*"Reservoirs Modeling of Gas Hydrate Deposits in North Slope of Alaska and Gulf of Mexico"*

**Srinath C. Velaga** (Ph.D.)  
Research Advisor: Brian Anderson  
*"Stability of Methane-Ethane-Propane Mixed Gas Hydrates Under Deep Water Conditions"*

## STUDENT NEWS

## SCHOLARSHIPS ANNOUNCED

In addition to the Academy scholarships that were identified in the summer 2014 edition of *The Chemical Engineering Major*, the following scholarships were awarded for the 2014-2015 academic year:

**Laken Adkins** ('16), Chemical Engineering Scholarship, DuPont Scholarship

**Austin Alatorre** ('17), Ruckman and Balmy Dietz Scholarship

**Huda Ashfaq** ('17), Lester Kincaid Scholarship

**Brent Bishop** ('16), Samuel and Doris Kasley Scholarship

**Joshua Buckland** ('17), Camden Coberly Memorial Scholarship

**Megan Cain** ('16), Martha Hopkins Hashinger Scholarship

**Molly Callaghan** ('15), William M. Smith Scholarship

**Jordan Chapman** ('17), Salvatore and Josephine Ciento Research Scholarship

**Kayla Cook** ('15), Martha Hopkins Hashinger Scholarship

**Bradley Cox** ('16), John M. Summerfield Scholarship

**Kathleen Cranmer** ('15), Martha Hopkins Hashinger Scholarship, James Wimer Memorial Scholarship

**Ross Dalton** ('15), Lester Kincaid Scholarship

**Ashley Dauntain** ('15), Williard W. Hodge Scholarship

**Ross Davis** ('16), Georgia Nash Memorial Scholarship, George A. and Sylvia B. Crago Scholarship

**Kevin Eisentrout** ('15), B.G. McGuire Scholarship, Candelaria Jacques Memorial Scholarship

**Nicholas Fouty** ('15), Lester Kincaid Scholarship

**Ryan Gibson** ('16), Albert Monack Scholarship, John M. Summerfield Scholarship

**Elijah Hedrick** ('17), W.J. Fitzgerald Scholarship

**Melanie Hott** ('17), Lester Kincaid Scholarship

**Matthew Jarvis** ('16), Chafin Chemical Engineering Scholarship, Samuel and Doris Kasley Scholarship

**Brock Karolchik** ('15), John M. Summerfield Scholarship

**Candace Kesselring** ('17), Lester Kincaid Scholarship

**Thomas Lewis** ('15), Williard W. Hodge Scholarship

**Amber Lilly** ('16), Candelaria Jacques Memorial Scholarship

**Michael Mallory** ('16), Samuel and Doris Kasley Scholarship

**Andrew Maloney** ('16), Samuel and Doris Kasley Scholarship

**Joseph Marozzi** ('15), Camden Coberly Memorial Scholarship, W.J. Fitzgerald Scholarship

**Erin Midkiff** ('17), John M. Summerfield Scholarship

**Katherine Reynolds** ('17), John M. Summerfield Scholarship

**James Roset** ('16), Samuel and Doris Kasley Scholarship

**Jeffrey Salmans** ('16), Georgia Nash Memorial Scholarship

**Ian Schau** ('16), Camden Coberly Memorial Scholarship

**Savannah Sims** ('16), Salvatore and Josephine Ciento Research Scholarship

**Katrina Torres**, James Wimer Memorial Scholarship

**Andrew White** ('15), Salvatore and Josephine Ciento Research Scholarship

*[Note: Multiple scholarships are given to some students because for a select group of them, the College promises scholarships of a certain amount each year. Once the student enters the Department, he/she continues to receive this amount, but now it must come from departmental scholarship funds. Since these amounts can be large (up to \$1,750), the Department must sometimes draw funds from several separate scholarship accounts to meet the total promised.]*



LEAVE A LEGACY®

*Make a Difference in the Lives That Follow*

As engineers know, a quality education is the key to a brighter future. Within the WVU Department of Chemical Engineering, a quality education is our number one priority.

Supporting the Department is a way to guarantee a brighter future for coming generations of chemical engineers. Your help is definitely needed.

An easy way for anyone to provide such support is through a gift provision included in a Will or revocable trust. The wording of "to the West Virginia University Foundation, Inc. to benefit the Statler College of Engineering and Mineral Resources' Department of Chemical Engineering" will provide such a gift.

You may specify that your gift will be managed as an endowed (permanent) fund, if it meets the minimum level needed, or as a non-endowed fund. Either can be named for someone you wish to honor. Undergraduate scholarships, research support for non-traditional graduate students and undergraduate conference or travel funds are definitely needed.

Establishing an endowed scholarship or a travel fund would require a current gift of \$25,000 or more. Remember, the greater the gift, the greater its impact. For graduate support, a fund of \$50,000 or more is appropriate.

Gifts that are a part of your estate plan count in "A State of Minds: The Campaign for West Virginia's University" as long as you will be at least age 70 by the end of the campaign on December 31, 2017. To learn more, contact Robert Bragg, director of development, at **304-293-4157** or **robert.bragg@mail.wvu.edu**.

## IN MEMORIAM

**Liang-Tseng "L.T." Fan** (PhD '57) passed away on August 4, at the age of 84. Fan joined the department of chemical engineering at Kansas State in 1958 as an instructor and became a full professor in 1963. He also served as department head for 30 years beginning in 1968. Fan received numerous awards and honors and was a Fellow of the American Institute of Chemical Engineers and the American Association for the Advancement of Science. Fan was a charter member of the WVU Academy of Chemical Engineers.

**R.C. Ruan** (MS '88) passed away on June 6, in Taiwan. Ruan received his master's under the direction of Joseph Shaeiwitz and obtained his Ph.D. from Purdue University. After receiving his doctorate, he returned to Taiwan and began his teaching career at Chung-Yuan Christian University, where he eventually served as department chair. After leaving Chung-Yuan Christian University, he became a professor at the National Central University in the chemical engineering department.



## 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 the Department of 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.



## REMEMBERING JAMES A. KENT (1922-2015)

**James A. Kent** (BS '43, MS '48, PhD '50) passed away January 6, 2015, after a brief illness. A charter member of the WVU Academy of Chemical Engineers, Kent spent the early part of his career as a project engineer and research group leader with Dow Chemical and Monsanto. He returned to WVU in 1954 as an assistant professor of chemical engineering and was later promoted to professor. In 1962, Kent was named associate dean and associate director of WVU's Engineering Experiment Station. He went on to serve as dean of engineering at Michigan Technology University and the University of Detroit. Until his passing, he was the editor of Kent and Riegel's "Handbook of Industrial Chemistry and Biotechnology." Kent resided with his wife, Anita, in Jupiter, Florida.

### Comments on his Passing

**From G. Lansing Blackshaw:** "While all deaths are sad, some are more painful than others, and Jim's passing is one of them. A man of many accomplishments, I remember him most for his kindness to and support of Molly and me when we arrived in Morgantown in 1965. As associate dean of engineering at the time, he had recruited and encouraged me to join the Department of Chemical Engineering as an assistant professor of nuclear engineering. I had previously worked for a couple of years in the nuclear industry at Atomics International, and had just completed my NE doctoral studies at North Carolina State University before coming to WVU. As the founder and director of the fledgling NE graduate program at WVU, Jim was looking to assemble a critical mass of faculty (which in 1965 was Bill Boyle and me) and he simultaneously was leading research efforts to develop wood plastic combinations technology utilizing CO-60 gamma irradiation techniques, an area in which Bill Boyle and George Taylor also were heavily involved. In addition, Jim had spearheaded University acquisition of an Atomics International designed AGN 211P 100 watt experimental nuclear reactor to support lab work in the NE program (I still have a major piece of the reactor's control console). When the NE program was

terminated in the 70s, I remained at WVU until 1983, and occasionally taught an introductory NE elective course that was open to all engineering students. We shall greatly miss him."

**From George Taylor:** "For some unknown reason, we tend to believe icons like Dr. Kent live on forever and their passing always comes as a great shock. Perhaps it is the impressions they have imprinted in our minds that makes this so. Dr. Kent was a mentor to me when I was a graduate student in his nuclear engineering program. I also worked directly for him in developing the wood plastic combination project. He and Lance Blackshaw were the finest example of brilliant instructors; while tough task masters, they were compassionate and caring about their students. He prepared me well to go out into industry where I continued to commercialize the WPC research into useful products that are still in existence today. Jim was always quick witted and hard working. For many years he was the editor of Kent and Riegel's "Handbook of Industrial Chemistry and Biotechnology" and was working on the latest revision the last time I spoke with him. Jim and his wife, Anita, became friends with my wife, Janette, and myself and we enjoyed several wonderful visits with them. Like so many, we will miss him."

## CLASS NOTES

### 1983

**Stuart Goodman (BS)** is currently working for Royal Dutch Shell on the island of Borneo (Brunei Darussalam) and enjoying travel around Southeast Asia.

### 1989

**Jeffrey White (BS)** was recently promoted to capital projects and procurement leader at Braskem America. He is responsible for the engineering and construction of capital projects at Braskem America's five U.S. polypropylene facilities and is retrofitting a line in La Porte, Texas, to produce

high molecular weight polyethylene. He also leads the procurement area, which sources services, catalysts, additives and materials for the Braskem America operations. White, his wife and daughter reside in Media, Pennsylvania.

### 1990

**Wendy Wilker (BS)** is a senior operations manager for Amazon and resides in Sellersburg, Indiana.

### 1992

**James A. Beach (BS, '98 MS)** is an environmental engineer

manager for the Pennsylvania Department of Environmental Protection in Norristown, Pennsylvania.

### 1998

**Fares D Alsewailem (MS, '03 PhD)** is a research professor for the Petrochemical Research Institute in Riyadh, Saudi Arabia.

### 2001

**Long Han (MS, '05 PhD)** is global product manager for DSM Functional Materials in Elgin, Illinois.

**Katherine S. Ziemer (PhD)** was recently appointed

the vice chair for chemical engineering at Northeastern University in Boston, Massachusetts. Ziemer joined the department upon receiving her doctorate from WVU. She has been instrumental in raising money for new equipment for the Unit Operations Teaching Laboratory as well as acquiring gently used equipment for enhancing the learning experience for chemical engineering students throughout the curriculum.

### 2006

**Vijaya A. Bansode (MS)** is a principal engineer for GS

Engineering, a South Korean-based firm. He resides in Mumbai, India.

### 2009

**David Kahan (BS)** is a sales engineer for Integrated Global Services, Inc.

**Charles Kling (BS)** is the brewmaster for Old Bust Head Brewing Company.

### 2011

**Erica Sladky (BS)** is a process engineer for Novozymes and resides in Omaha, Nebraska.

# THE MAJOR WV

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Non-Profit  
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Permit No. 34

## Alumni Update March 2015

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. 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](mailto:linda.rogers@mail.wvu.edu).

Name: \_\_\_\_\_

Degree(s): \_\_\_\_\_ Year: \_\_\_\_\_

Home Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Home Phone: \_\_\_\_\_

Business Phone: \_\_\_\_\_

E-mail: \_\_\_\_\_

Employer: \_\_\_\_\_

Position Title: \_\_\_\_\_

Employer Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Preferred Mailing Address:  Home  Work

Brief News of Professional and Family Activities for Future Newsletters:

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Suggestions/Comments: \_\_\_\_\_

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This newsletter is published twice yearly to keep our alumni and friends informed of Departmental news and ongoing activities. For additional information, visit our website: [www.che.statler.wvu.edu](http://www.che.statler.wvu.edu)

We continue to make it more informative and useful to our visitors. Let us know your thoughts and comments, and drop us a line.