Dear Alumni and Friends,

Before I begin my annual update of the growth and changes in the department, I must make note of the passing of Professor Dick Eisenberg, one of the greatest supporters of the chemical engineering program at the University of Rochester. Some of you recently received my message of his passing via email. For those that were not aware, I am sorry to bring this news. Recent graduates know Eisenberg from his creation of the Eisenberg summer research fellowships and the annual Eisenberg award given at graduation. Some of our older alumni remember Eisenberg as a teacher and mentor. He joined the Department of Chemical Engineering at Rochester in 1959 and remained here until his retirement in 1983. However, he remained actively engaged with the department as professor emeritus until his passing. Eisenberg was very generous with his time and provided mentoring for faculty and students alike. I’m very appreciative of the time I had with him. Professor Eisenberg will be greatly missed.

We have had a number of big changes in the Department of Chemical Engineering over the past year that I’d like to keep you apprised of. Our department continues to grow rapidly; with the entering fall 2013 freshman class, a recent high of 64. The total undergraduate chemical engineering student population has increased 78 percent over the past five years to 210. To accommodate our growth, Gavett Hall is undergoing big changes as well. Our last newsletter from fall 2012 described the renovation of the main undergraduate chemical engineering lab (room 119). This past summer, a majority of the remainder of the first floor of Gavett was renovated to create more functional undergraduate lab space and offices for our laboratory instructors. The undergraduate lab facilities have gone from being a longstanding sore spot to a showcase for the new flexible, team-based laboratory educational paradigm. If you are ever in the Rochester area, we would love to give you a tour of the new facilities and get feedback from you on how well our efforts are meeting the goal of preparing students for their careers.

We recently hired Dave Foster as a full-time associate professor in the department. Many of you know Foster as a longtime adjunct instructor who twice won the undergraduate engineering teacher of the year award. We are fortunate to now have Dave full time. He continues to teach fluids courses and is also now assisting with undergraduate laboratory instruction and student advising. Dave is coauthoring a revision of the textbook, Fundamentals of Momentum, Heat, and Mass Transport, that is one of the most widely used textbooks on transport phenomena at engineering schools across the country.

Wyatt Tenhaeff also joined the department this past summer. Assistant Professor Tenhaeff ran a successful research program at Oak Ridge National Laboratory, where he was a staff scientist prior to coming to Rochester. We are excited about the new research initiatives that Wyatt has planned. He brings a wealth of expertise in electrochemistry and materials science. Wyatt has gotten off to a very strong start, as he was recently awarded a grant from the Department of Energy to study new types of lithium ion batteries that are safer and more durable than those currently on the market.

In 2010, our PhD program was ranked within the top 15 out of 106 in the United States by the National Research Council. This major milestone in the department’s nearly century-old history has motivated a forward-looking plan for strategic growth in the immediate future. We aspire to garner worldwide recognition in basic and applied research by addressing technological issues of global significance and to leverage research excellence for outstanding education at all levels. As we move forward, our plan calls for strategic research and educational activities in the areas of resource sustainability, clean energy, and human health. The chemical engineering discipline is well positioned to address problems of critical societal needs for the foreseeable future.

We welcome your feedback and comments on our plans as part of our team. You are also welcome to visit with our department when you have a chance to be in Rochester. Anyone who is interested is welcome to call, email, or meet me in person. I would like to gain from your collective knowledge and suggestions as we move to our department’s 100th anniversary in 2015. Meliora!
Richard Eisenberg, distinguished professor of metallurgical engineering, was associated with the University of Rochester for nearly 50 years. He once offhandedly described himself as a “do-it-yourselfer”—a description that could not have been more fitting. In his youth, he worked his way through the University and gained the rare distinction of membership in both Phi Beta Kappa and Tau Beta Pi. As a Rochester professor, he dedicated himself to undergraduate teaching, counting both Phi Beta Kappa and Tau Beta Pi. As a Rochester professor, he was a kind, caring, and dedicated educator. We were friends from the time I graduated from the U of R until his passing. He was a major influence in shaping my life, and I shall always be grateful for his guidance and friendship.” —Joseph B. Steinman, Class of 1958

“Dick Eisenberg was my undergraduate advisor and my professor in the four undergraduate courses that I took as a metallurgical engineering minor. He was one of the very best teachers that I ever had in all of my university coursework (BSChE, MChE, MBA, PhD). More importantly, he was a kind, caring, and dedicated educator. We were friends from the time I graduated from the U of R until his passing. He was a major influence in shaping my life, and I shall always be grateful for his guidance and friendship.” —Emory Champney, Class of 1947

“Dick Eisenberg was a fine, fine man.” —Marcus E. Kantz, Class of 1968

“Dick gave us his best advice toward becoming real engineers after our service in World War II, and we all loved him for it.” —Emory Champney, Class of 1947

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Professor Eisenberg served as University marshal for more than 15 years, as an advisor to the engineering honor society Tau Beta Pi for more than 35 years, and, for a decade and a half, as director of graduate studies for the former University College of Liberal and Applied Studies. He was a member of the Class of 1945 and earned a master’s degree from Rochester in 1948.

Professor Eisenberg had a lifelong love for the outdoors, spending all of his available time at his mountain retreat on Little Wolf Lake in the Adirondack Mountains and belonging to hiking clubs—well into his 80s—both there and in the Rochester area.

Professor Eisenberg will be remembered as a gentleman and will be dearly missed.
Wyatt Tenhaeff

Wyatt Tenhaeff joined the department as an assistant professor in July 2013. He earned his PhD from Massachusetts Institute of Technology in 2009. Wyatt's research emphasizes the development of novel thin-film materials and structures for several applications. Electrochemical energy storage in reversible lithium ion and lithium metal batteries is a primary interest. He is developing approaches to improve the stability (e.g., cycle life) and power performance in lithium batteries. For lithium metal batteries, for example, Wyatt is studying the stabilization of lithium metal anodes for safe, reversible cycling where the formation of dendritic morphologies is suppressed. In lithium ion batteries, thin coating layers and/or surface modifications are used to dramatically alter reaction kinetics.

He has expertise in many thin-film synthesis techniques— both vacuum and solution-based. In particular, he exploits the exceptional compositional control and conformability of initiated chemical vapor deposition (iCVD) for the synthesis of polymeric thin films. The fundamentals of this technique are studied such that new capabilities can be developed. Wyatt is also interested in redox flow batteries for grid-level energy storage applications. He is utilizing his expertise in solid electrolyte characterization to develop new flow battery concepts. Replacing the porous membrane separating the two charge-storage solutions with a liquid-impermeable, solid electrolyte provides new opportunities that he is exploring.

Matthew Yates

Congratulations to Matthew Yates on his promotion to full professor and appointment as the chemical engineering department chair, effective January 1, 2013. Since his arrival at the University in fall 2001, his research has attracted nearly $3 million in funding from the National Science Foundation, the U.S. Department of Energy, the Institutes of Health, and the industrial sector to investigate materials with high interfacial area, serving to create sophisticated systems with novel properties. In particular, his group has developed techniques to modulate the size, shape, composition, and assembly of small particles for drug delivery, fuel cell membranes, polymer composites, optical materials, and other applications. His independent research has resulted in collaborations with scientists at the Medical Center, electrical and computer engineering and chemistry departments, the Laboratory for Laser Energetics, General Motors, and Eastman Kodak Company.

In addition, he serves as the director of a $3.2 million NSF-IGERT program on distributed renewable energy. To date, Matt has published 60 papers in high-impact journals, providing high-quality education to five PhD graduates, including an assistant professor at the University of Maryland, and seven MS graduates. Moreover, he has been an exemplary mentor for undergraduate research and an outstanding graduate and undergraduate teacher.

J. H. David Wu

Professor David Wu was invited to serve as one of the five plenary lecturers at the International Symposium on the Genetics of Industrial Microorganisms (ISGM), held in Cancun in June 2013. The meeting, held every four years, is considered one of the most important in this field, with more than 1,000 attendees from around the world. David's lecture focused on the identification of DNA-binding factors, or transcription factors, that modulate the pertinent metabolic pathways leading to biofuel production. He presented the discoveries of new transcription factors and metabolic pathways in this bacterium that were made in his lab. Professor Wu's lab has been studying Clostridium thermocellum, an anaerobic bacterium that thrives in extremely high temperatures, for more than 25 years. He is one of the most recognized researchers in this field.

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Alexander Shestopalov

Assistant Professor Alex Shestopalov was reappointed in July for another three years with the department. Alex's research focuses on the development of new unconventional fabrication and patterning techniques and the use of these techniques in preparation of functional micro- and nanomaterials. Inorganic multicomponent colloids: The non-symmetric structure of Janus particles produces novel physical properties and unusual aggregation behavior that make these materials attractive candidates for drug delivery and as nanosensors and nanoprobes, microscopic mixers, and emulsifiers. In Alex's research group, he focuses on the development of new patterning pathways for the inorganic metal-oxide Janus particles and on the development of procedures for their orthogonal functionalization. He also develops methods for their targeted immobilization and aggregation and investigates some of the applications of these particles as potential photonic crystals, plasmonic sensors, SERS and PEF imaging agents, small molecules carriers, and other applications. His independent research has resulted in collaborations with scientists at the Medical Center, electrical and computer engineering and chemistry departments, the Laboratory for Laser Energetics, General Motors, and Eastman Kodak Company.

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David Foster

David Foster formally joined the department as a full-time associate professor this year. His appointment announced in January, officially took effect July 2013. Dave spent 12 years with the department as an adjunct professor while working for Eastman Kodak Company before his much-desired promotion. He has been recognized for excellence in teaching and commitment to the University community, as judged by both students and faculty colleagues. Dave's service has been honored twice by winning the Undergraduate Engineering Professor of the Year Award in 2006 and again in 2012. He will also serve as the department's ACHÉ faculty advisor while continuing to teach both undergraduate and graduate courses. We wish Dave great success in his new role!

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**Bob Bly ’79**
Graduated in 1979 and has been a full-time freelance direct response copywriter since February 1982. I write direct mail and online promotions for such clients as Intuit, IBM, Luminar, Newsmax, Fidelity Carrier Services, Nautilus, Sony, and ITT. I am also an author, and my 80th book, <i>Start Your Own Home Business</i>, will be published in May by Quill Driver Books.

**Robert W. Bly**
I studied under Rusty Harris and Jorge Seminario. While working to receive my PhD, I co-operated at NASA Kennedy Space Center in firing test motors. Due to my commitment to maintain a position as a Co-Lead of the LAVA (Lunar Advanced Volatile Analytical) fluid subsystem with the part of RESOLVE (Regional & Environ- ment Science and Oxygen & Lunar Volatile Extraction) program at the University of Wisconsin-Madison, I direct the Technical Japanese Program at the UW-Madison, where I’ve been teaching technical Japanese for 23 years. The attached photo was taken at our daughter’s graduation from the University of Rochester. She received her BS in chemical engineering in 2012.

**Warren Hasselgren ’47, ’49 (MS)**
“Now how many years ago was I running a company 45 hours a week, dealing in new product development and production? My first day in business was running a small metal-stamping machine with a one-man crew. I’ve always been interested in being a part of and contributing to a larger organization that can help bring new products to market. My company was sold in 1979 and I joined a company in Germany and later returned to the US. I’ve been working in product and technology development for over 40 years and am now focusing on product development, technology, and sales and marketing.”

**Gary Brooks ’59**
I am pleased to provide a short status report. A few years ago, I was elected a Fellow of the AIA (Architects). Other notables include my 30-year involvement in the consultation business over 400 companies. Currently, I am an adjunct professor at NYU/Poly University and at Fashion Institute of Technology teaching entrepreneurship courses related to entrepreneurship. I continue to mentor early stage companies and also serve as an expert witness in cases where management performance and director malfeasance are the issues in the case. I am interested in the progress that the University of Rochester is making with their multidisci- plinary entrepreneurship program and hope that the new venture capital business can start coming a reality. I wish that the alumni could be called upon to contribute their expertise to this important effort.”

**Mary Coan ’07**
“I received my PhD in chemical engineering with an emphasis on microelectronics from Texas A&M University in August 2012. While I studied under Rusty Harris and Jorge Seminario. While working to receive my PhD, I co-operated at NASA Kennedy Space Center in firing test motors. Due to my commitment to maintain a position as a Co-Lead of the LAVA (Lunar Advanced Volatile Analytical) fluid subsystem with the part of RESOLVE (Regional & Environment Science and Oxygen & Lunar Volatile Extraction) program at the University of Wisconsin-Madison, I direct the Technical Japanese Program at the UW-Madison, where I’ve been teaching technical Japanese for 23 years. The attached photo was taken at our daughter’s graduation from the University of Rochester. She received her BS in chemical engineering in 2012.”

**Kevin E. Healy ’83**
“I am the Jan Fandrych Distin- guished Professor in Engineering at the University of California– Berkeley in the departments of bioengineering and integrative biology. My research focuses on issues related to the biological and physical sciences and engineering and was recently appointed as chair of the department of bioengineering. I received a BS in chemical engineering from the University of Rochester in 1983 and obtained my master’s and doctorate degrees in chemical engineering from the University of Pennsylvania in 1985 and 1989, respectively. My research interests include the design and synthesis of bioin- spired materials that actively direct the fate of embryos and tissues and facilitate regeneration of damaged tissues and organs. Major discoveries from my laboratory have centered on understanding cell fate and tissue formation in contact with materials that are tunable in both their biological content and mechanical properties. I conduct studies of applications in medicine, dentistry, and bio- technology. I have authored or coauthored more than 200 published articles, abstracts, or book chapters and recently coedited a multi-volume scholarly tome on the biomaterials field containing an all-encompassing com- prehensive treatise that accurately captures the diversity, breadth, and dimensions of the field. I am a named inventor on numerous United States and international patents relat- ing to biomaterials, therapeutics, and medical devices. Since 2002, with my colleagues at the University of Rochester, I have been involved in developing systems for applications in biotechnology and regenerative medicine. Currently, I am focused on the development of the Bioresorbable Medical Devices Research Center, which is funded by the National Institutes of Health. I have served on numerous panels and grant review study sections in NIH. I have given more than 200 invited lectures in the fields of biomed- ical engineering and biomaterials, and have chaired the Gordon Research Conferences on Biomaterials and Biocompatibility. I was elected a Fellow of the American Institute of Medical and Biological Engineering (AMBE) and was honored with the 2011 Clemson Award for Outstanding contributions to basic biomaterials science.”

**James L. Davis ’75, ’12**
“I am a professor in the Department of Engineering Professional Development at the University of Wis- consin–Madison College of Engineering. I direct the Technical Japanese Program at the UW-Madison, where I’ve been teaching technical Japanese for 23 years. The attached photo was taken at our daughter’s graduation from the University of Rochester. She received her BS in chemical engineering in 2012.”

**Loraine Huchler ’83**
“I am the first female to graduate from Texas Tech University teaching in the Department of Mechanical Engineering, and was appointed as chair of the department of mechanical engineering. My education at the University of Roch- ester and River Campus was key to this important effort. I graduated in 1985 with an emphasis on microelectronics.”

**Jen Su (1959).**
“Since graduation, I have been following inspiration from my studies in the chemical engineering de- partment and continuing to learn about and explore issues relating to energy and the environment. Much of my life energy and time are focused on local food, design- ing conserved landscapes and articles on a wide variety of technical and risk manage- ment subjects. Since 1999, I have written a quarterly column for Food CSC Processing, an international trade journal. Under my leadership, MarTech is now viewed as a leading risk management firm for industrial water systems. I serve on the editorial advisory board for the trade journal Chemical Engineering Insights, published by the American Institute of Chemical Engineers and have published my first of a four-book series, Operating Processors for Industrial Water Management: Efficient Water Systems. I serve as the chair of the adult education committee at my church and enjoy tending my gardens and, with my husband, ro- vating historic commercial buildings near our summer home on the Eastern Shore of Virginia.”

**Chad Hunter ’12**
I completed an M5 degree in chemical engineering practice at MIT in August 2013. It was an intense program that focused on a deep understanding of chemical engineering principles taught in the classroom in addition to challenging students through projects experiences. I spent two semesters at two industrial locations. After finishing the M5CP program at MIT, I will be joining Exxon- Mobil in September as part of the Global Energy Management System (GEMS) program within their Process Engineering Sector. The GEMS program focuses on energy efficiency and seeks to redesign and implement energy saving techniques within all opera- tions at ExxonMobil.”

**Steven Kraft ’08**
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**David Palmer ’59**
“I have been retired since July 2012. I spent 35 years on the Town Board of Clay, New York, retired from that position September 2005, and moved to Lakeland, Florida I spend 5 months plus a year in the Thousand Islands— and fill in as a tour guide at Singer Castle. I also consult with my homeowers association in Florida with regard to storm- water permitting.”

**Marcel Pomerleau**
“I am a CFP(R) practitioner in Buffalo, N.Y. (obviously, not in the engineering field!).”

**Robert Castle.**
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**Please send any updates to chenewsletter@hse.rochester.edu.**
Congratulations to the Class of 2013!

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