

Student Awards

In addition to a number of internal and University-wide recognitions, we are proud to announce that in 2009 Erica Brown received the Goldwater Scholarship, Zachary Taylor was awarded a National Science Foundation Graduate Research Fellowship, and Dimitrios Argyris won the 2009 CoMSEF Graduate Student Award at the Annual AIChE Meeting in Nashville, TN.



Erica Brown



Zac Taylor



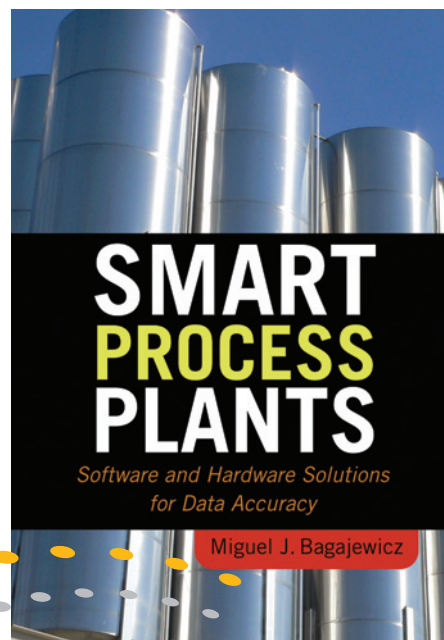
Dimitrios Argyris

Publications

Out of the 65 peer-reviewed journal articles published in 2009, we would like to highlight:

- *Ultraviolet-visible-near infrared spectroscopy in catalysis: Theory, experiment, analysis, and application under reaction conditions*, Advances in Catalysis, 52 (2009) 129-211, by F. C. Jentoft.
- *Transient stenotic-like occlusions as a possible mechanism for renovascular hypertension due to aneurysm*, Journal of the American Society of Hypertension, 3 (2009) 192-200, by L. A. Heflin, C. B. Street, D. V. Papavassiliou, D. C. Kem, D. Wu, and E. A. O'Rear.
- *Online measurement of fiber diameter and temperature in the melt-spinning and melt-blowing processes*, Industrial & Engineering Chemistry Research, 48 (2009) 8736-8744, by V. T. Marla, R. L. Shambaugh, and D. V. Papavassiliou.

Our faculty has an established tradition in book publishing. After Harrison's 'Bioseparations Science and Engineering', published in 2003, Bagajewicz published his 'Smart Process Plants' with McGraw Hill in 2009.



Research Grants

Our growth in research appears sustainable! A number of research grants were awarded to our faculty in 2009, including:

- *MRI: Acquisition of Thermal Analysis and Calorimetry Equipment for Multiple Applications Emphasizing Research on Sustainable Fuels*, \$440,751 awarded from the National Science Foundation to Friederike Jentoft, Daniel Resasco, Robert White, and Rolf Jentoft.
- *Boosting Oklahoma Oil Production Using Next Generation Surfactant Technology*, \$2,000,000 awarded from the Oklahoma EDGE Fund to Jeffrey Harwell and Benjamin Shiau.
- *Effects of Hydrophobicity-Induced Slip on Turbulence Drag and on Turbulence Structure*, \$230,000 awarded from the National Science Foundation to Dimitrios Papavassiliou and Alberto Striolo.
- *Interfacially Active SWNT/Silica Nano-Hybrids*, \$250,000 awarded from the Advanced Energy Consortium to Daniel Resasco, Jeffrey Harwell, and Benjamin Shiau.
- *Electrolytes at Solid-Water Interfaces: Theoretical Studies for Practical Applications*, \$420,000 awarded from the Department of Energy to Alberto Striolo.



Faculty Development

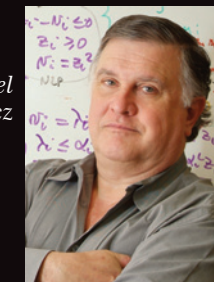
Among a long list of personal achievements, let us announce that in 2009:



Jeffrey Harwell

- Jeffrey H. Harwell and Brian P. Grady have been awarded the prestigious Asahi Glass Chair and the Conoco/DuPont Professorship, respectively.

Miguel Bagajewicz



- Miguel J. Bagajewicz and Friederike C. Jentoft became Associate Editors for the International Journal of Chemical Engineering and for Advances in Catalysis, respectively.



Friederike Jentoft

- Miguel J. Bagajewicz was the Plenary Speaker at the opening ceremony for the European Symposium on Computer Aided Process Engineering, ESCAPE 18.



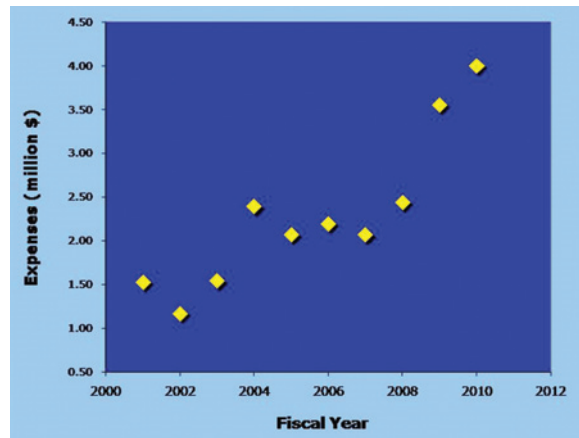
- Richard G. Mallinson became a Fellow of the American Institute of Chemical Engineers, AIChE.

Richard Mallinson



Brian Grady

- Brian P. Grady became the Director of the Institute for Applied Surfactant Research, IASR. IASR is the oldest continuously active consortium at the University of Oklahoma, active for almost 25 years.



Research Expenditures

In fiscal year 2009 our research expenditures totaled \$3.55 million. Because of a number of recently awarded grants, projections for fiscal year 2010 top \$4.0 million. Not only are these all-time-high research expenditures, they are even more significant considering the downturn suffered by our economy in the recent past.

These investments bring tangible fruits!

In 2009 we granted 9 Ph.D. and 9 M.S. degrees in Chemical Engineering. During the same period we also advised students who earned 5 Ph.D. and 8 M.S. degrees in Bioengineering. Our graduate student population has grown to unprecedented size, and is now composed by 34 Ph.D. and 25 M.S. candidates. Our students attract recognition from the academic community, as demonstrated, e.g., by the 2009 National Science Foundation Graduate Research Fellowship awarded to Zachary Taylor.

We authored 65 peer-reviewed journal articles published in 2009. This is a 10% increase over 2008. It wasn't enough for us to publish numerous articles; our faculty also continues to produce high-impact research. For example, Daniel Resasco and his students are the authors of the article 'Solid Nanoparticles that Catalyze Biofuel Upgrade Reactions at the Water-/Oil Interface', appearing in the January 1st issue of Science.

Should you be interested in learning more about us, our achievements and our program, we are launching our newly designed web site at <http://cbme.ou.edu> Contact us at **(405)325-5811** or at cbme@ou.edu

Thank you again for your continuous interest and support.

Sincerely,
Lance Lobban, Director

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CBME 2009 Achievements

Chemical, Biological and Materials Engineering



The University of Oklahoma

Dear Colleagues,

Greetings from the School of Chemical, Biological and Materials Engineering of the University of Oklahoma, Norman campus. On behalf of our faculty, I extend to you and your department our best wishes for a fantastic new year!

As 2009 comes to an end, we would like to share with you the accomplishments of our students and faculty within the last twelve months. First though, let us wish the best of luck to Dr. Peter S. McFetridge, Assistant Professor.

After joining our department in 2002, Dr. McFetridge is now heading for the University of Florida, Gainesville, where he will join the ranks of the Department of Biomedical Engineering. Good luck Pete!



Dr. Lance Lobban, director

We are proud to announce that Dr. Pete Heinzelman will become Assistant Professor of Chemical Engineering in June 2010. Dr. Heinzelman is now completing his post-doctoral appointment at Caltech, directed by Dr. Frances Arnold. We are excited and convinced that his



Dr. Heinzelman and his students will employ protein engineering tools and techniques to overcome challenges in renewable fuels and chemicals, medicine, and the environment.

expertise in the area of protein engineering will strengthen the Biofuels Initiative of the University of Oklahoma.

Dr. Heinzelman joins a very healthy department!

Several metrics show that we continue to grow our research enterprise while maintaining the strongest commitment to undergraduate education. In solar year 2009 thirty-three students earned a BS degree in Chemical Engineering from our school. As in previous years, our graduates continue to be highly sought after by industry and academia alike.