



President's Corner The Year to Come

I extend to each of you and your families my best wishes for a safe, happy, and healthy New Year. I look forward to serving as your AIChE President for 2012.

For AIChE, 2011 was a good year. We beat our budget with strong meetings, journal and advertising sales, as well as membership revenue. We successfully expanded the Spring, Annual, and niche conferences. Our focus on member benefits resulted in a growing ChemE on Demand library (<http://apps.aiche.org/chemeondemand/home.aspx>), new training opportunities, and virtual career fairs. Innovation was key in 2011, as we launched a new e-learning program and added “hot topic” web forums. AIChE also played a leading role in coordinating the celebration of the International Year of Chemistry during 2011.

The coming year promises the same potential to increase member value, expand our membership, and serve societal needs.

Professional societies like AIChE must provide a rewarding membership experience for their constituents. With the explosion of information and services available from online resources, the need to enhance the value of AIChE membership is more important than ever. My commitment is to strengthen the value proposition of AIChE in order to increase member satisfaction and simultaneously bolster the Institute's professional membership population.

We must continue to grow AIChE by adding new “homes” for those communities working in the fundamentals of chemical engineering. For example, we recently formed the Upstream Engineering and Flow Assurance Forum (UEFAF) to represent engineers who are not part of

the downstream world. This group's success was evident during a recent sold-out workshop co-sponsored by the Society of Petroleum Engineers. And, the UEFAF will launch the First International Conference on Upstream Engineering and Flow Assurance at our 2012 Spring Meeting and Global Congress on Process Safety, in Houston, TX, April 1–5.

We are also launching a new manufacturing industry-technology group focused on smart manufacturing. We are investigating several partnerships with other communities of chemical engineering practice. AIChE is extending its reach for new members as we improve our global presence in Latin America, India, and elsewhere in Asia. And, a new Virtual Section (<http://virtual.aiche.org/>) is bringing professional connections and a local section experience to members who are overseas or otherwise not located near a local section.

One-quarter of AIChE's revenues come from membership dues. As we benchmark other societies, we see a need to reduce that dependency. Our efforts today are focused on bringing to our constituents new AIChE entities and revenue opportunities that provide member value. For instance, we have been involved in providing an energy peer-review service that has tremendous growth potential. We are also developing several new businesses, such as regional meetings, a consultants' network, undergraduate safety education, and new Centers for Excellence.

AIChE is taking a fresh look at many of the services that it provides to members and the profession at-large. We have restructured the mission of our Government Relations Committee to provide a stronger voice in advising

policymakers about green technologies and energy management. We are re-evaluating our delivery of training and continuing education by dedicating a team of volunteers to ensure that we meet your ever-changing needs. Our awards system for both academic and industrial members is being refined to ensure that it is comprehensive and that it maintains a high standard of professional recognition. Also, a group of volunteers is working to re-engage executive-level participation in AIChE from a wide range of chemical engineering-related enterprises.

As you are aware by now, AIChE's lease on its 3 Park Avenue headquarters office in New York City is expiring in 2013. Our Board of Directors has chosen to stay in the New York City area based on a comprehensive cost analysis (discussed in the Dec. 2011 issue of *CEP*, pp. 52–53). We are searching for properties that meet the Board's recommendations. To keep you informed of our progress, and to answer your questions on this topic, we are using email, electronic mailboxes (NYRelocation@aiche.org), and articles in *CEP*, AIChE SmartBrief, the ChEnected blog, and our website (www.AIChE.org/move). Information is also available at our major meetings and conferences. My commitment to you is to ensure transparency and to competently communicate the process of relocation to our members. I invite your feedback through any of the means above.

It is an honor and a pleasure to serve you this coming year. I hope to look back after my term to see my legacy being recognized for adding member value as well as adding members to the rolls of AIChE.

— David A. Rosenthal,
AIChE President 2012

Agrawal Awarded National Medal of Technology and Innovation

Rakesh Agrawal, the Winthrop E. Stone Distinguished Professor in the School of Chemical Engineering at Purdue Univ., has been awarded the U.S. National Medal of Technology and Innovation — the highest honor for technological achievement bestowed by the U.S. government. The award was presented to Agrawal by President Barack Obama at a White House ceremony on Oct. 21, 2011.

Agrawal was recognized “for an extraordinary record of innovations in improving the energy efficiency and reducing the cost of gas liquefaction and separation.” The award citation continued: “These innovations have had significant positive impacts on electronic device manufacturing, liquefied gas production, and the supply of industrial gases for diverse industries.” Agrawal was one of five inventors who received the National Medal of Technology and Innovation at the ceremony.

Agrawal’s current research is in



▲ Rakesh Agrawal (left) receives the National Medal of Technology and Innovation from President Barack Obama. Photo: Ryan K. Morris.

energy-related areas involving the conversion of biomass to liquid fuels, processes related to low-cost solar cells, energy systems analysis, and high-efficiency separations processes. Prior to joining Purdue in 2004, Agrawal spent 24 years working at Air Products and Chemicals, Inc. — where he received

most of his 116 U.S. patents and nearly 500 non-U.S. patents.

A member of the National Academy of Engineering, Agrawal served on the National Research Council (NRC) panel that issued the report “The Hydrogen Economy.” He has also served on the National Academies’ Renewables Panel for the Committee on America’s Energy Future, and he is currently a member of the NRC’s Board on Energy and Environmental Systems.

A Fellow and past director of AIChE, Agrawal received AIChE’s 2011 Founders Award for Contributions to the Field of Chemical Engineering.

The National Medal of Technology and Innovation was created in 1980 and is administered by the U.S. Dept. of Commerce’s Patent and Trademark Office. The award recognizes those who have made lasting contributions to America’s competitiveness and quality of life and helped strengthen the nation’s technological workforce.

LANGER RECEIVES BIOSCIENCE INNOVATION AWARD

Robert Langer, the David H. Koch Institute Professor in the Dept. of Chemical Engineering at the Massachusetts Institute of Technology, has been honored by *The Economist* — one of the world’s preeminent current-affairs publications — with its Innovation Award for 2011 in the category of Bioscience. The honor was presented on Oct. 21, 2011, in London, during the publication’s tenth annual Innovation Awards Ceremony.

The Bioscience Innovation Award, sponsored by Astellas Pharma Europe Ltd., recognized Langer as one of the world’s most prolific and creative biomedical engineers, citing his invention of polymer-based drug- and hormone-delivery systems and his development of polymers on which replacement tissue or organs can be grown. Langer’s work has resulted in more than 800 issued and pending patents worldwide, which have been licensed to more than 220 pharmaceutical, chemical, biotechnology, and medical device companies.

Langer’s biomedical engineering laboratory at MIT

is the largest of its kind. His current research includes developing nanoparticles to further improve and target drug delivery, which could lead to long-term delivery systems for insulin, anti-cancer drugs, growth factors, gene therapy agents, and vaccines. Langer is also studying ways to control the growth of stem cells, as well as biodegradable polymers that are absorbed by the body once their usefulness has passed.

In addition to Langer, some of the other innovation luminaries honored by *The Economist* included Jeff Bezos, founder of Amazon.com (Corporate Use of Innovation); Gregg Zehr, the developer of Amazon.com’s Kindle (Consumer Products); and Paul Buchheit, the inventor of gmail at Google (Computing and Telecoms). The complete roster of Innovation Award recipients is available at www.economist.com.



Connie E. Carroll, AIChE Fellow and Past Institute Secretary

Connie E. Carroll, a past Institute Secretary and a Trustee of the AIChE Foundation, died peacefully on Nov. 14, 2011, in Morgantown, WV, after a brief illness.

A resident of The Woodlands, TX, Carroll was an AIChE leader for more than 20 years, serving in a variety of leadership roles on the local and national levels.

Al Wechsler, who served with Carroll on AIChE's Board of Directors during the 1990s, and on the AIChE Foundation Board, said "Connie's cheerful attitude, enthusiasm, professionalism, perseverance, and dedication to supporting AIChE, young professional members, and chemical engineering students made it a pleasure for all of us to work with her on so many AIChE activities."

Born in Charleston, WV, Carroll received a BS in chemistry from West Virginia Univ. in 1980. She began her engineering career at Union Carbide Corp. at its Seadrift, TX, facility, where she progressed from laboratory chemist to senior production engineer to department head, along the way gaining experience in data management, quality management, production management and customer relationships. She was transferred to Union Carbide's headquarters in Danbury, CT, where she was World Wide Issues Manager for the company's surfactant business, and then Marketing Manager for UCON Fluids and Lubricants. When Dow acquired Union Carbide, Carroll joined Chevron Phillips Chemical Co. in

The Woodlands, TX, where she was a global product manager and a global marketing manager for specialty chemicals until 2009. Recently, she was a consultant focusing on business development and marketing in sustainable and green chemistry.



A Fellow of AIChE, Carroll began her AIChE volunteer activities at the Guadalupe (Victoria, TX) Local Section in the 1980s, and later worked to bring satellite meetings of the South Texas (Houston) Section to members in The Woodlands area. On the Institute level, she became active on the Public Relations Committee, among other groups, and was elected Director (1992 to 1994) and Secretary (1995 to 1997). More recently, she was elected a Trustee of the AIChE Foundation, where she worked on the Grants Committee and on projects for developing young AIChE members as future leaders of the Institute.

Carroll enjoyed music, photography, and cooking, and took satisfaction in helping young ChEs in their careers. She was an accomplished scuba diver and often took diving trips to the Caribbean, Central America, and the South Pacific.

A remembrance event for Connie Carroll is being planned for the April 2012 AIChE Spring Meeting and Global Congress on Process Safety in Houston, TX.

AIChE Members are Elected to National Academy's Institute of Medicine

The Institute of Medicine, the health branch of the U.S. National Academy of Sciences, recently elected its 2011 class of new members, including three members of AIChE:

Mark E. Davis, the Warren and Katharine Schlinger Professor of Chemical Engineering, California Institute of Technology, Pasadena, CA.

George Georgiou, professor, departments of chemical engineering, biomedical engineering, and molecular genetics and microbiology, Univ. of Texas at Austin.

David A. Tirrell, the Ross McCollum-William H. Corcoran Professor and professor of chemistry and chemical engineering, California Institute of Technology, Pasadena, CA.

Election to the Institute of Medicine is one of the United States' highest honors in the fields of health and medicine. Members make a commitment to volunteer their service on Institute of Medicine committees, boards, and other activities. Information on the Institute of Medicine's activities is available at www.iom.edu.

Institute and Board Award Nominations: Deadlines Extended for Industry Honors

Nominations are being accepted for AIChE's 2012 Institute and Board of Directors' Awards. These honors, to be presented at the October 2012 AIChE Annual Meeting in Pittsburgh, PA, recognize significant achievement in the chemical engineering profession, and include a series of recently inaugurated awards that celebrate outstanding contributions in industrial practice (discussed in the Dec. 2011 issue of *CEP*, p. 51). Information on each award and the nomination process can be found at www.aiche.org/InstituteandBoardAwards.

The nomination deadlines for 2012 are as follows:

- | | |
|--|--------------------|
| • Most Institute and Board Awards | Due: Feb. 15, 2012 |
| • Engineering & Constuction; Industrial Research & Development; Process Operations | Due: Apr. 15, 2012 |
| • Industrial Progress Award (New in 2012) | Due: May 1, 2012 |

Nomination forms, supporting letters, and supplemental materials should be saved as a single electronic document (PDF) and submitted to AIChE on a CD. Nominations must be postmarked by the dates indicated. Questions about the nomination process may be addressed to awards@aiiche.org.

MICHAEL HAROLD IS THE NEW AICHE JOURNAL EDITOR

Michael P. Harold, professor of chemical and biomolecular engineering at the Univ. of Houston, has become the editor of the *AICHE Journal*, the Institute's flagship research publication. Harold succeeds Stanley I. Sandler (Univ. of Delaware), who retired as editor in December 2011 after more than ten years in that position.

June Wispelwey, AIChE's executive director, said that Harold will "shepherd the *AICHE Journal* into a new era of growth," and "assure that it continues to align with the changing needs of the discipline." Under Harold's leadership, she added, the journal will "reflect the increasing diversity of chemical engineering research and the expanding global nature of the chemical enterprise."

Harold plans several initiatives to make the *AICHE Journal* the place to bring specialized research to the attention of the broad discipline, including high-impact, shorter papers with rapid turnaround. Occasional topical issues and issues honoring distinguished chemical engineers are among the planned innovations.

At the Univ. of Houston, Harold served as chair of his department from 2000 to 2008, and founded the Texas Diesel Testing and Research Center. Earlier in his career, he spent several years with DuPont in research and technology management positions, and was a chemical engineering faculty member at the Univ. of Massachusetts at Amherst.

Recently, Harold has served AIChE as a consulting editor for the *AICHE Journal* and as a member of the Chemical Engineering Technology Operating Council. He is a past chair of the Publications Committee and the Catalysis and Reaction Engineering Div.

In Memoriam

Charles L. Andrews, 64, Richfield, MN
Joseph T. Badyrka, 59, Birmingham, AL
Russell K. Blaine, 95, Des Moines, IA
Steven B. Chall, 70, Lakeworth, FL
George A. Daniels*, 78, Baton Rouge, LA
Philip T. Eubank*, 75, Bryan, TX
Ralph V. Green, 98, Charleston, WV
Richard R. Lunt, 67, East Lansing, MI
Lester G. Massey, 93, Hudson, OH
George J. Maytrott, 91, Southbury, CT
William A. Sandberg, 83, Las Vegas, NV
Joseph F. Terenzi, 79, Franklin Lakes, NJ

* AIChE Fellow

AIChE Calendar



Conferences

For information and registration details, visit www.aiche.org/conferences or call Customer Service at 1-800-242-4363 or 1-203-702-7660 (outside the U.S.)

FEBRUARY
7-9, 2012

Carbon Management Technology Conference
Caribe Royal Hotel and Convention Center • Orlando, FL

FEBRUARY
19-22, 2012

Sustainability in (Bio)Pharmaceuticals
Sheraton Old San Juan • San Juan, PR

APRIL
1-5, 2012

2012 AIChE Spring Meeting & 8th Global Congress on Process Safety
Houston Hilton and George R. Brown Convention Center • Houston, TX

APRIL
3-4, 2012

Institute for Sustainability's Sustainable Packaging Symposium 2012: Advancing the Greener Supply Chain
Houston Hilton and George R. Brown Convention Center • Houston, TX

APRIL 29 - MAY 2, 2012

Society for Biological Engineering's 3rd International Conference on Stem Cell Engineering
Sheraton Seattle • Seattle, WA

APRIL 30 - MAY 3, 2012

2012 Offshore Technology Conference
Reliant Center • Houston, TX



Webinars

Register and view live and archived webinars at <http://www.aiche.org/webinars/>

JAN. 11, 2012
2:00-3:00 PM ET

Maintenance and Reliability for Chemical Engineers, Part Three: The Tools of Reliability
Presented by David A. Rosenthal, P.E.

JAN. 18, 2012
2:00-3:00 PM ET

Outcomes of the EPA/NSP/AIChE Center for Sustainable Technology Practices Sustainable Supply Chain Design Scientific Workshop
Presented by Prof. Ignacio E. Grossmann
Free for AIChE Members

JAN. 25, 2012
2:00-3:00 PM ET

Sustainable Engineering Forum Webinar: Green Design, Green Energy, and Sustainability
Presented by Dr. Urmila M. Diwekar

FEB. 1, 2012
2:00-3:00 PM ET

Cheers! The Chemistry of Wine
Presented by Dr. Ariel Fenster

FEB. 29, 2012
2:00-3:00 PM ET

Explosion Protection with In-line Flame Arresters
Presented by Dr. Michael Davies