



International Year of
CHEMISTRY
2011

The Celebration Begins: IYC 2011 Causes Reactions in Paris, Philadelphia

The International Year of Chemistry (IYC 2011) is underway, following its official launch at two world-class events.

The celebration began Jan. 27–28, 2011, at the world headquarters of the United Nations Educational, Scientific, and Cultural Organization (UNESCO) in Paris, then moved to the U.S. for a week-long North American kick-off at the Chemical Heritage Foundation (CHF) in Philadelphia, PA. AIChE collaborated with CHF, the American Chemical Society (ACS), the American Chemistry Council (ACC), and other organizations on the U.S. launch.

During the Paris festivities, attendees gathered at the Sorbonne to honor Marie Curie — the first woman to receive a Nobel Prize, and one of the scientists best known to laypeople around the world (see p. 72) — with discussions of her life and the challenges she overcame on her path to immortality. Speakers included Helene Langevin-Joliot, Curie's granddaughter, who spoke about Curie and women's contributions to chemistry.

In Paris, AIChE Secretary Kimberly Ogden and Treasurer Andre Da Costa joined scientists, engineers, industry leaders, Nobel laureates, and government officials for seminars, an exhibition, and other social and cultural events celebrating the role of chemistry in addressing societal challenges. Some of the talks also explored chemistry's

heritage. For example, Zhigang Shuai, professor of physical chemistry at Tsinghua Univ., Beijing, spoke about the history of chemistry in China up to the 17th century. Thomas Tritton, president and CEO of CHF, proposed a top ten list of the “rock stars of chemistry” — Marie Curie, John Dalton, Emil Fischer, Antoine Lavoisier, Justus Liebig, Dmitri Mendeleev, Linus Pauling, Joseph Priestley, Friedrich Wöhler, and Robert B. Woodward.

On Feb. 1, the CHF hosted more than 200 visitors, including members of AIChE's Board of Directors, AIChE staff, and volunteer-leaders, at the opening-day festivities. At the introductory session, entitled “Global Challenges/Chemistry Solutions,” a panel of leaders from industry and academia, moderated by Daniel Nocera, professor of chemistry at the Massachusetts Institute of Technology, discussed how the chemical enterprise could solve the problems that face the world in the 21st century: energy, water, food, and human health. (The two-hour session is available online by clicking the IYC 2011 banner at www.chemheritage.org.) The subsequent days featured events aimed at the general public.

On Feb. 2, the CHF collaborated with Headhouse Books on a discussion of *The Emperor of Scent* by Chandler Burr. Chemist Joseph Rucker of Philadelphia's Integral Molecular, Inc., led

the discussion of the sense and sensibility of smell.

- On Feb. 3, professor and historical recreator James Armstead came to Philadelphia in the character of Percy Julian, the 20th century chemist who was the subject of the PBS documentary titled *Forgotten Genius*. Armstead spoke to students at Philadelphia's African-American Museum and at The College of Physicians.

- On Feb. 4., “Elemental Matters,” an exhibit of seven contemporary artists responding to the periodic table of elements, opened at the CHF's Hach Gallery. More than 250 visitors met the artists, whose work will remain on display through Dec. 2011.

- On Feb. 5, more than 3,000 visitors to the Franklin Institute, Philadelphia's largest science museum, received a hands-on tour of chemistry experiments through the ages.

Separate from these activities, CHF made chemistry part of Valentine's Day by hosting “Science on Tap” at Philadelphia's National Mechanics bar and restaurant on Feb. 14, featuring Sam Kean, author of *The Disappearing Spoon and Other True Tales of Madness, Love and the History of the World from the Periodic Table of Elements*. CHF has also launched “It's Elemental,” a national high-school video com-

Article continues on page 63

▶ A distinguished panel from industry and academia convened in Philadelphia, PA, on Feb. 1, to launch the U.S. IYC celebration with a discussion of “Global Challenges/Chemistry Solutions.” Seated from left: Joshua S. Boger, former Chair and CEO, Vertex Pharmaceuticals; Rita Colwell, Professor, Johns Hopkins Univ. and former Director, National Science Foundation. Standing from left: Andrew N. Liveris, Chair and CEO, Dow Chemical; Thomas R. Tritton, President and CEO, Chemical Heritage Foundation; Janet Hering, Director, Swiss Federal Institute of Aquatic Science and Technology; Daniel G. Nocera, Professor of Energy and Professor of Chemistry, MIT; Ellen Kullman, Chair and CEO, DuPont. Photo by: Conrad Erb.



FORMER DIRECTOR CASELLI LEAVES LEGACY WITH FOUNDATION BEQUEST

The AIChE Foundation recognizes the generosity and foresight of people who have arranged for long-term financial support of the Institute by inducting these donors into the Foundation's Legacy Society.

One of the latest Legacy Society contributions is a bequest made in memory of Albert V. Caselli, who was a longtime member and leader of AIChE. The gift of \$50,000 was made in honor of Caselli's dedication to AIChE, and was announced in the will of his wife Elizabeth, who passed away in July 2010. Albert Caselli died in 1997.

Albert Caselli spent his 45-year chemical engineering career at Shell Oil in the U.S. and overseas, working in petrochemicals, process development, process design and engineering, and technical economics. A Fellow of AIChE, he was active in the South Texas (Houston) Local Section, and

served on the Institute's Board of Directors from 1975 to 1977. He was also instrumental in establishing AIChE's first international local section — Netherlands/Belgium — in 1975.

The Casellis' donation will support the AIChE Foundation's "Where Need is Greatest Annual Fund," which provides funding for high-priority initiatives such as continuing education, scholarships, K-12 outreach, and public and government education. Current programs include:

- Opening Doors — an outreach effort that aims to integrate young chemical engineers into the leadership of the profession and the Institute
- Grand Challenges and Opportunities — a public and government education initiative on critical issues pertaining to water and energy
- The World of Chemical Engineering — programs that expand AIChE's global reach

• Best in Class — a project to update the undergraduate curriculum and promote lifelong learning

• Expertise Anytime, Anywhere — a think-tank for developing innovative products and services using web technologies.

Donations of any amount can be made to the AIChE Foundation to support the projects and activities that further the Institute's mission and strengthen its role as global leader of the chemical engineering profession. Information about the Foundation and its activities is available at www.aiche.org/foundation.

The AIChE Legacy Society was established in 2007 to honor those who have included AIChE in their long-term plans through a bequest provision, life-income gift, or other deferred giving arrangement. To learn more about the Legacy Society, visit www.legacy.vg/aiche/giving/2.html.

Marquardt Elected Chair of Germany's Council of Science and Humanities

Wolfgang Marquardt, a chemical engineer and Chair of Process Systems Engineering at RWTH Aachen Univ., Aachen, Germany, has been elected chair of the German Council of Science and Humanities (The Wissenschaftsrat). As head of the Council, Marquardt will advise German Chancellor Angela Merkel and all levels of the federal and state governments on questions relating to science and research in Germany. The Council also accredits university curricula and makes recommendations pertaining to the competitiveness of German research and science.

A member of AIChE, Marquardt is only the third engineer to lead the Council of Science and Humanities.

Marquardt began his career at the

Univ. of Stuttgart, where he earned his PhD in chemical engineering in 1988. He was also a postdoctoral fellow at the Univ. of Wisconsin-Madison, where he was later a visiting professor. Since 1992, he has been the Chair of Process Systems Engineering at RWTH Aachen Univ., where his research is focused on the development and application of model-based methods in process systems engineering.

Marquardt is editor-in-chief of the *Journal of Process Control*, and a member of the strategy boards of RWTH Aachen Univ. and its University Hospital. He has also acted as director of RWTH's Center for Computational Engineering Science.

He joined Germany's Science Council as a member in 2010, with

an objective to "represent engineering in its full breadth."

As chair of the Council, he says that a particular area of focus

will be Germany's "integration into the European Research Area."

Among many honors, in 2001, Marquardt was awarded the Leibniz prize by the German Research Foundation, the most prestigious research prize in Germany. In 2008, at AIChE's Annual Meeting in Philadelphia, PA, he delivered the Danckwerts Lecture, an honor jointly sponsored by AIChE and IChemE.



IYC 2011 (cont'd)

petition that invites students to submit videos inspired by a single element for an interactive periodic table. Nearly 700 student teams submitted videos, displayed at www.chemheritage.org/elementalvideos.

AIChE's Andre Da Costa, who attended both the Paris and Philadelphia celebrations, notes that speakers at both events identified chemistry as the science that most contributes to human comfort. "With world population projected to reach 9 billion by 2050, chemistry will play a pivotal role in understanding and preserving our world," says Da Costa. "It is imperative that we raise public awareness about the role of chemistry and spark the interest and engagement of the young generation, beginning in elementary school."

Da Costa noted that the IYC 2011 celebration will continue throughout the year — including IYC-related events at AIChE's Spring and Annual Meetings (in Chicago, IL, and Minneapolis, MN, respectively) — and he encourages AIChE members to join the IYC Network and to participate in planned events.

To learn more about the full slate of IYC activities, visit www.chemistry2011.org.

Reported by Neil Gussman, Chemical Heritage Foundation, and Andre Da Costa, AIChE Treasurer, Corning, Inc.

In Memoriam

Charles V. Ash, 62, Bakersfield, CA
Laszlo Bakonyvari, 77, San Rafael, CA
Charles P. Bopp, 85, Long Beach, CA
Winthrop D. Comley, 95, Millis, MA
Robert H. Fariss, 82, Point Townsend, WA
Rudolph C. Frey, 85, Houston, TX
Larry F. Grimm, 64, Richardson, TX
Thomas L. Grisham, 65, Tyler, TX
Ervin C. Harney, 90, Diamond Bar, CA
Robert R. Imsande, 89, Escondido, CA
Perry D. Maddux, 52, Hixson, TN
Norman Price, 87, Perkasio, PA
Joe M. Smith, 94, Davis, CA*
Frank P. Williamson, 82, Montgomery, TX

* 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.)

MARCH 13–17, 2011	2011 AIChE Spring Meeting and 7th Global Congress on Process Safety Hyatt Regency Chicago • Chicago, IL
MARCH 16–18, 2011	Sustainable Packaging Symposium 2011 Hyatt Regency Chicago • Chicago, IL
MAY 2–5, 2011	Offshore Technology Conference (OTC) 2011 Reliant Park • Houston, TX
JUNE 5–8, 2011	AIChE-DECHEMA Global Conference on Sustainability in the Process Industries (ESPI) Hong Kong Univ. of Science and Technology • Hong Kong, SAR, China
SEPTEMBER 11–15, 2011	56th Annual Safety in Ammonia Plants and Related Facilities Symposium Sheraton Montreal Hotel • Montreal, QC
OCTOBER 16–21, 2011	2011 AIChE Annual Meeting Minneapolis Convention Center • Minneapolis, MN

Scheduled Webinars



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

MARCH 2, 2011 2:00–3:00 PM ET	Applying Lean Principles to Manufacturing and Design in Process Industries Presented by Adnan Siddiqui
MARCH 9, 2011 2:00–3:00 PM ET	AIChE's Leadership Webinars: Chemical Engineering Essentials from Academic Authors – Session Five: Chemical Reaction Engineering Part One: Isothermal Design and Analysis Presented by Dr. H. Scott Fogler
MARCH 10, 2011 4:00–5:00 PM ET	Society for Biological Engineering (SBE) Webinar: Cybernetic Approach to Metabolic Modeling Presented by Dr. Doraiswami Ramkrishna <i>(Free for SBE Members)</i>
MARCH 23, 2011 2:00–3:00 PM ET	Industrial Energy Management in the 21st Century Presented by Alan Rossiter
APRIL 6, 2011 2:00–3:00 PM ET	Tapping into the Chemistry of Beer and Brewing Presented by Dr. Charles Bamford
APRIL 13, 2011 2:00–3:00 PM ET	Introduction to Fluidized Bed Technology Presented by Dr. Karl V. Jacob and Dr. Ray Cocco