

CANDIDATES' ELECTION STATEMENTS AND BACKGROUNDS

FOR PRESIDENT-ELECT

JOSEPH S. FRANCISCO

Purdue Section. Purdue University, West Lafayette, Ind.

Born: 1955

Academic record: University of Texas, Austin, B.S. in chemistry (honors), 1977; Massachusetts Institute of Technology, Ph.D., 1983

Honors: Purdue University Herbert Newby McCoy Award, 2007; Alexander von Humboldt Research Award for Senior U.S. Scientist, 2001; American Association for the Advancement of Science (AAAS), fellow, 2001; American Physical Society, fellow, 1998; Sigma Xi National Lecturer, 1995–97; National Organization for the Professional Advancement of Black Chemists & Chemical Engineers (NOBCChE) Percy L. Julian Award for Pure & Applied Research, 1995; AAAS Mentor Award, 1994; Guggenheim Fellow, 1993; Sloan Research Fellow, 1990–92; Camille & Henry Dreyfus Teacher-Scholar Award, 1990–95; National Science Foundation Presidential Young Investigator, 1988–93; provost postdoc fellow, Massachusetts Institute of Technology, 1985; research fellow, Cambridge University, 1983–85

Professional positions (for past 10 years): Purdue University, William E. Moore Distinguished Professor, 2006 to date, professor, 1995–2006; Università di Bologna, Italy, Institute of Advanced

Studies, visiting senior fellow, 2003; Williams College, Sterling A. Brown Visiting Professor, 1998

Service in ACS national offices: Committee on Professional Training, 2003–08; ACS Award Selection Panel, 2006 to date; Task Force on Minority Faculty in the Chemical Academic Community, vice chair, 2001–02; Presidential Task Force on Enhancing Innovation & Competitiveness, 2007; Committee on National Historic Chemical Landmarks, consultant, 2008 to date; ACS Board Oversight Group on Leadership Development, 2004 to date; editorial advisory board, *Journal of Physical Chemistry*, 2008–10

Service in ACS offices: Member of ACS since 1991

Member: AAAS; American Physical Society; Sigma Xi; NOBCChE. *ACS Division:* Physical Chemistry

Related activities: NOBCChE, president, 2005–07, Board of Directors, 2003–05; National Research Council, U.S. National Committee for the International Union of Pure & Applied Chemistry, vice chair, 2007 to date; National Science Foundation, Geosciences Advisory Committee, 2007 to date, Committee of Visitors for Chemistry Division, 2007; Council for Chemical Research, organizing committee, 2007–08; National Science Foundation, Committee on Equal Opportunities in Science & Engineering, 2006 to date; Department of Energy, Committee of Visitors for Chemical Sciences, Geosciences & Biosciences, 2004–05;

National Research Council, Chemical Sciences Roundtable, 2001–03; Department of Army, Army Research Science Board, 1997–99; Department of Navy, Senior Science Advisory Committee (NRAC), 1994–96; California Institute of Technology, research associate, 1991; *Journal of Molecular Structure-Theochem*, editorial advisory board, 2004–10; *Spectrochimica Acta Part A*, editorial advisory board, 1990 to date; *Pure & Applied Geophysics*, Atmospheric & Ocean Science Editor, 1998–2001; published more than 400 journal articles, nine book chapters, and coauthored the textbook “Chemical Kinetics and Dynamics”

FRANCISCO'S STATEMENT

Πάντα ρεῖ και οὐδὲν μένει

Everything flows, nothing stands still.

—Heraclitus (c. 535–475 B.C.)

Societal and financial drivers are pushing U.S. chemical enterprises to go global. But what does globalization mean for the domestic employee in terms of job security and early retirement? The solution to a number of global issues—such as clean water, global climate change, and sustainable energy—requires skilled scientists working

together. Do we have that new workforce that is capable of working with and across different cultures to tackle these global societal challenges? The U.S. has been a leader in the fields of chemistry and chemical engineering because of its commitment to and strength in research and innovation. However, declining funds for basic research are compromising our leadership in discovery and innovation.

To adapt, we need to:

- Prepare our students to thrive in the global economy.
- Attract a broader pool of students into our profession.
- Promote innovation and entrepreneurship in the chemical sciences.

EDUCATION. The skill sets sought by companies are also changing as a result of increased competition in the global marketplace. Recruits who have experiences that allow them to work across different cultures and who have international experience have a distinct advantage. The bottom line is: *Global skills are important in getting the job, keeping the job, and getting ahead in the job.* ACS must take a strong leadership role in the education system that prepares our future chemists and chemical engineers to compete globally.

In addition, our talent pool is decreasing. Fewer international students trained in the U.S. are remaining in this country, and fewer domestic students are entering into the chemical profession.

As your president, I will start a dialogue with the community, educators, and members to address the question of what can we do to better prepare our students for a chemical enterprise that requires global skills. Engaging recruiters and leaders of global chemical businesses in this dialogue is central to developing strategies and policies to guide our educational institutions. As your president, I will work to support those programs in ACS, such as Project SEED and ACS Scholars, which strive to broaden the pool of domestic students into our profession.

PROMOTING INNOVATION. Today, more than ever, research is international. A program to encourage international expe-

rience by Americans would increase our awareness of advancements being made in other countries. We need a mechanism to support U.S. talent to go abroad to learn about innovations in the chemical enterprise and transfer that knowledge into the U.S. marketplace. We need a mechanism to maintain the influx of new innovations and ideas.

As your president, I will initiate the creation of an international center with the objective of generating an international network of cooperation to generate and share new ideas in the chemical field. A goal is to sponsor U.S. talent to work abroad and to sponsor top-flight international talent to come to the U.S. This center will advocate collaboration with other international chemical societies. The center will bring industry, government, and academia to work together to direct our talent pool in emerging science areas relating to world and national economic challenges. This moves ACS into a leadership role for fostering both national and international collaborations.

PROMOTING NEW EMPLOYMENT OPPORTUNITIES. New chemical technologies create products and drive economic growth. An American core competency has traditionally been entrepreneurship. Small companies provide employment opportunities and generate new ideas and technologies.

As your president, I will promote innovation and entrepreneurship by:

- Creation and implementation of new workshops for fresh academic graduates on how to start a company.
- Creation of a network of our experienced and retired chemical industrial leaders as advisors for new entrepreneurs.
- Promotion of entrepreneurial contests that require student teams to develop innovative products and create successful business plans for production and marketing.

PARTNERSHIPS. The chemical world is evolving, and we need to take action. You know many of the challenges that we face

in our everyday jobs and have ideas on how we can address them. These ideas need to be championed by universities, government, and industry. The ACS Board and past-presidents have started the process of building trust and nurturing relationships with our stakeholders to support the society's mission.

As your president, I will listen to you and be a powerful voice for ACS and its members before Congress, private industry, federal funding agencies, and international assemblies.

Remember, **YOUR PRESIDENT SERVES YOU.** Please visit: <http://web.ics.purdue.edu/~francisc>.



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