

GAFFNEY, ANNE M. *Division of Catalysis Science & Technology (Idaho Section)*. Idaho National Laboratory, Idaho Falls, Idaho.

Academic Record: University of Delaware, Ph.D., Physical Organic Chemistry, 1981; Mount Holyoke College, B.A., Chemistry and Mathematics, 1976.

Honors: ACS Energy & Fuels Distinguished Researcher Award in Petroleum Chemistry, 2019; ACS Fellow, 2010; ACS Distinguished Service Award, Division of Petroleum Chemistry, 2010; ACS Industrial Chemistry Award, 2013; Eugene J. Houdry Award of the North American Catalysis Society, 2015; Chemical Heritage Foundation, Women in Science Inductee, 2014; University of Delaware, Wall of Fame Inductee, 2014; Service & Leadership Award, 7th World Congress on Oxidation Catalysis, 2013; Honorary Committee for the 100th Anniversary of Girl Scouting, 2012; Industrial Colloquium Series Distinguished Lecturer Award, Center for Environmentally Beneficial Catalysis, CEBC, The University of Kansas, 2011; Mount Holyoke College Alumnae Achievement Award, 2011; Recipient of the Tribute to Women and Industry Award, sponsored by YWCA, honoring women and corporations in New Jersey, 2007; Recipient of the DOW/Union Carbide Reaction Engineering and Catalysis Seminar Series Award, 2006; Recipient of the Catalysis Club of Philadelphia Award for outstanding contributions to the field of catalysis, 1999; Take the Lead in Science and Technology Award, for outstanding leadership, awarded by the Girl Scouts of Pennsylvania, 1993.

Professional Positions (for past 10 years): Idaho National Laboratory, Chief Science Officer, Laboratory Fellow, 2014 to date; Director of R&D, Specialty Materials, INVISTA, 2011-13; Lummus Technology, Vice President of Technology, 2005-10.

Service in ACS National Offices: Council Policy Committee, 2019-22; Committee on Science, 2019-20; Committee on Economic and Professional Affairs, 2008-13, Committee Associate, 2007.

Service in ACS Offices: *Division of Catalysis Science & Technology:* Councilor, 2016-21, 2011-14. *Division of Energy & Fuels:* Councilor, 2012-13. *Division of Petroleum Chemistry:* Councilor, 2007-11; Alternate Councilor, 2005-06; Chair, 2000-01; Chair-Elect, 1999-2000; Treasurer, 1996-99; Region IV Representative, 1994-96. *Catalysis and Surface Science:* Secretary General Chair, 2003; Chair-Elect, 2002.

Member (current): Member ACS since 1976. Organic Reaction Chemical Society; North American Catalysis Society; Western States Catalysis Society; Philadelphia Catalysis Club; American Institute of Chemical Engineers. *ACS Division(s):* Catalysis Science and Technology; and Energy and Fuels.

Related Activities: American Institute of Chemical Engineers, Director of the Catalysis and Reaction Engineering Division, 2016 to date; North American Catalysis Society, International Fund Raising Co-Chair 2016 to date, International Meeting Chair 2005; International Representative for the U.S., 2018, and Co-Chair of the World Congress on Oxidation Catalysis, 2013; Selected "Woman of Influence", Mount Holyoke College, 2012; Editorial Board Member, *Catalysis Today*, 2008-09; U.S. Representative to the Executive Committee of the 6th World Congress on Oxidation Catalysis, 2008-09; Advisor to the National Academies on Science, Engineering, and Medicine, 2008-10; DOE Workshop Writer on "Basic Research Needs in Catalysis for Energy Conversion", 2007; NSF/DOE Workshop Writer on "Breaking the Chemical and Engineering Barriers to Lignocellulosic Biofuels", 2007; Organic Reaction Chemical Society, Editorial Board, 2006-10, Director 2002-06;

Rohm and Haas, Senior Research Fellow, 2000-05; Philadelphia Catalysis Club, National Representative, 1996-2015, Director 1989-95, Chair 1986-87, Chair-Elect, 1985-86; published 105 peer-reviewed journal articles, 100 conference proceeding publications, 4 book chapters, and 256 patent/patent publications.

STATEMENT
Anne M. Gaffney

I appreciate your consideration for American Chemical Society President-Elect in 2022. As a 42-year member, I have taken to heart its passion for the global chemistry enterprise. With the world at a crossroads, I would be honored to lead ACS and convey its mission to the nation. If chosen as President-Elect, my top priorities would be advancing chemical science education and job creation by emphasizing advanced manufacturing and technologies at the energy-food-water nexus.

Fostering innovation

Research and development is the tap root of industrial growth and evolution; strong R&D sprouts productive innovation. While we consider the importance of chemical sciences to our economy, we should not forget that the whole world looks to the United States for innovation. By emphasizing R&D, ACS can foster global innovation, advance the chemical science workforce, inform public policy and enhance public understanding of how chemistry affects our daily lives.

The supply of freshwater for residential, industrial and agricultural uses has become an increasingly significant issue worldwide. Technical challenges associated with the energy-water-food nexus, center around the economics of water recovery and reuse. Significant drivers exist for lowering industrial water life-cycle costs by avoiding costly discharge and disposal. R&D can improve water technology and systems, integrate processes and preserve system flexibility to meet water quality goals at the correct cost.

The manufacturing sector is another area widely recognized for its importance to the U.S. economy. Yet funding for industrial chemistry R&D, which underlies much of this sector, has steadily declined for the past 30 years. If U.S. manufacturing is to maintain a competitive edge, R&D will be necessary: to develop new processes and technologies; to ensure critical material supplies; to improve feedstock source utilization; and to enable next-generation catalysis. ACS leadership can help maintain our nation's status as the world leader in research and innovation.

This national science priority emphasizes partnerships between industry, academia and national labs. As someone whose career has spanned each of these areas, I have seen how the three can work together to propel new ideas through the process of discovery, development and commercialization. These efforts can be broadened internationally, and as ACS president-elect, I would make it a priority to interact and consult with international scientific organizations.

Strengthening education and the workforce

Innovation will lead to skilled U.S. jobs that prompt job creation within supporting industries. During my previous ACS service, I led multiple national surveys to understand trends related to training and compensation in the government, industry and academia. As our professional landscape evolves, I would continue efforts to ensure salary and compensation parity for all professional chemists and scientists.

To maintain the chemical industry's position of leadership, the United States needs a strong educational system producing highly qualified chemists, scientists and educators. Robust mentoring

and internship relationships throughout academia, national labs and industry are paramount for passing knowledge and skills to the next generation. Educational programming is already in place at the national labs to broaden the scientific insights of students ranging from precollege to postdoctoral. This system can serve as a model to supply academia, the government and industry with high-quality new talent.

Sustainability in public policy

When our message is articulated clearly for elected officials, it is highly persuasive. It is crucial for ACS to spread awareness of how vital the chemical sciences are to manufacturing, the millions of people it employs, and its contribution to the nation's exports and gross domestic product. As President-Elect, I would prioritize development of a cadre of advocates to spread the message at all levels of government. As recently as March 2016, I participated in a congressional briefing about advanced manufacturing, and my current professional position gives me a front-row seat to national policy discussions and decisions. ACS has an important leadership role to play in ensuring informed decision-makers.

Public outreach and openness

From the clothes we wear to the critical materials in our electronic devices, there is no escaping the impact of chemistry on our daily lives. Although not every person aspires to become a chemist or scientist, our national interest hinges on a scientifically literate public that recognizes how better chemistry is essential to a better quality of life. From its national programs to local sections, ACS has a network in place to demonstrate that we can offer solutions to challenges that might otherwise seem insurmountable. If elected, I would relish the opportunity to boost the public's understanding of how chemistry touches their everyday lives.

Thank you for your thoughtful consideration.