

Government-University-Industry Research Roundtable October 2022 Webinar

The Importance of Chemical Research to the U.S. Economy

Abstract:

The Government-University-Industry Research Roundtable will convene a webinar to discuss a recent consensus study from the National Academies of Sciences, Engineering, and Medicine, on [The Importance of Chemical Research to the U.S. Economy](#). The report details the impact of chemical research on society and the economy, and explores strategies and options for research investments that ensure U.S. leadership while considering environmental sustainability and a diverse chemical economy workforce.

The chair of the study, *Mark Wrighton*, President of the George Washington University; and vice-chair *Cathy Tway*, Technology & Applications Director at Johnson Matthey, will present the report's conclusions and recommendations around four key themes: the balance of U.S. competitiveness and collaboration, a changing landscape in the chemical enterprise, emerging technologies, and a focus on sustainability.

Speaker Biographies:



Mark S. Wrighton is currently serving as president of George Washington University. He is concurrently on sabbatical from Washington University in St. Louis where he is the James and Mary Wertsch Distinguished University Professor and Chancellor Emeritus. Dr. Wrighton served as the 14th Chancellor of the University from July 1, 1995, through May 31, 2019. He served as a presidential appointee to the National Science Board (2000–2006), which is the science policy advisor to the President and Congress and is the primary advisory board of the National Science Foundation. He is a past chair of the Business–Higher Education Forum and the Association of American Universities.

Dr. Wrighton has received many awards for his research and scholarly writing, including the distinguished MacArthur Prize. He is the author of over 300 articles in professional and scholarly journals, is the holder of 16 patents, and co-author of a book, *Organometallic Photochemistry*. His research interests are in the areas of transition metal catalysis, photochemistry, surface chemistry, molecular electronics, and photoprocesses at electrodes. He is a fellow of the American Academy of Arts and Sciences and of the American Association for the Advancement of Science and is a member of the American Philosophical Society. Active in public and professional affairs, he has served on numerous government panels and has been a consultant to

industry. He is an active member of numerous professional organizations and serves as a director on the boards of national companies and St. Louis organizations. From 1990 until 1995, he served as provost and chief academic officer at the Massachusetts Institute of Technology. A member of the MIT faculty from 1972 until 1995, Dr. Wrighton became a full professor of chemistry in 1977. He was named Frederick G. Keyes Professor of Chemistry in 1981 and became head of the Chemistry Department in 1987. In 1989, he was named the first holder of the Ciba-Geigy Professorship. Wrighton received his Ph.D. in chemistry from the California Institute of Technology in 1972.



Cathy L. Tway is the Technology and Applications Director for Catalyst Technologies at Johnson Matthey. In this role, she is responsible for a global team of scientists and engineers specializing in catalysis, process technologies, and engineering design. Additionally, Dr. Tway provides technical input, oversight, and direction as well as ensures that customer-driven research and development (R&D) and engineering are delivered efficiently. Prior to joining Johnson Matthey, Dr. Tway held positions at Dow, Celanese, Solutia, and Akzo Nobel, holding both R&D leadership and individual contributor roles. Dr. Tway has more than 25 years of industrial experience that covers the entire catalyst project life cycle

including front-end opportunity identification and creation of new technologies, process scale-up, commercialization, and plant support. Over her career, she has commercialized two new inorganic materials and four catalyst technologies, with two of these processes still in use today. She has served on numerous review panels, boards, and committees including the committee for the National Academies of Sciences consensus study report, *Gaseous Carbon Waste Streams Utilization*. She earned her Ph.D. in physical inorganic chemistry from the University of Nebraska–Lincoln.