



MARY L. GOOD

1931–2019

Elected in 1987

“For outstanding contributions as educator, researcher, and manager of research and development, and as distinguished spokesperson for R&D policy.”

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MARY LOWE GOOD was a science and technology icon. Her achievements and contributions were recognized in academia and government, and she was at the vanguard of the few women who moved into positions of responsibility in industrial research. It must have been both exhilarating and challenging—exhilarating to be at the forefront and challenging to deal with occasional, if not persistent, male skepticism and even hostility. But Mary endured and excelled. The arc of her career is testimony to that.

Mary Lowe was born June 20, 1931, in Grapevine, Texas, to Winnie Mercer Lowe and John Willice Lowe, who likely instilled in her a deep interest in education. In 1942 the family moved to Kirby, Arkansas, where her father was a school principal and her mother a teacher and librarian. The family later moved about 60 miles to Willisville, where Mary attended high school. She enrolled at Arkansas State Teacher’s College in Conway (now the University of Central Arkansas) with the intention of becoming a home economics teacher, but became interested in chemistry as a freshman and changed her major to chemistry and physics. She graduated with a bachelor of science degree in 1950.

A fellowship for graduate study enabled her to study radiochemistry with Raymond R. Edwards at the University of

Arkansas, where she met Bill Jewel Good, a fellow graduate student in physics. They married in 1952 and the following year she received her master of science and in 1955 her PhD, both in chemistry.

Her graduate work involved studying radioactive iodine in aqueous solutions (used for treating thyroid conditions). She examined processes of solvent extraction of metal complexes and described the chemical and physical properties of chemical species in an organic solvent. She applied the Nernst equation effect to explain why solutions of radioactive iodine were unstable and determine the concentration at which species would be at equilibrium values.

Mary spent 25 years in teaching and research at Louisiana State University, in Baton Rouge, and the University of New Orleans (at the time part of the state university system). At Louisiana State she was director of the radiochemistry laboratory and an instructor and assistant professor of chemistry (1954–58), working on iodine and sulfur chemistry with Sean McGlynn.

In 1958 Mary and Bill moved to New Orleans when both were offered positions at a newly established state university campus. The Louisiana State University New Orleans (LSUNO) was the first university in the southern states to open as a fully integrated institution.

Expanding on her work in radiochemistry, Mary became interested in using spectroscopy to study inorganic compounds, taking measurements and relating experimental results to theoretical predictions. She studied molecular bonding in both solutions and solid states and was able to extract rhodium complexes using organic solvents to demonstrate that they were bimetallic.

Progressing through the academic ranks, Mary became the Boyd Professor of Chemistry at LSUNO (1974–78), the first woman to achieve the university's most distinguished rank. In 1978 she returned to LSU Baton Rouge to develop a new program as the Boyd Professor of Materials Science in the Division of Engineering Research.

Mary was a pioneer in the use of Mössbauer spectroscopy techniques for basic chemical research. By studying the

interactions of gamma rays with matter it is possible to observe very small differences in the energy of electrons in atoms, enabling identification of the molecular structure of complicated compounds containing metal ions. She was the first to observe Mössbauer effects in ruthenium and its various oxidation states, contributing to the understanding of this important catalyst by deriving detailed chemical and structural information. She also investigated the physical and biological aspects of marine antifouling coatings, used to remove barnacles from ships. During her academic career she published more than 100 articles in refereed journals as well as several books.

In 1980 Mary left academia to head the Engineered Materials Research Division at Signal Research Center, Inc. (previously Universal Oil Products) near Chicago, with a staff of 400 scientists and technicians and annual sales of approximately \$3 billion. She became vice president and director of research in 1981, and president and director of research in 1985. When the Signal Companies were acquired by Allied Corporation, she became president of AlliedSignal (AS) Engineered Materials Research in 1986 and then senior vice president of technology in Morristown, NJ, coordinating the activities of three research centers.

Mary championed research and technology at her research centers, but she went to bat for technology in the AS divisions as well. Maxine Savitz recalls that, when she wanted to create a facility for manufacturing structural ceramics at the Garrett Corporation (part of AlliedSignal), Mary supported her pitch to AS COO Alan Belzer. Maxine recalls Alan saying, "How can I turn two women down?" The facility was built.

Those of us who knew Mary as an industrial research executive knew her to be a confident and decisive leader. She encouraged participation, but was not infinitely forbearing. She encouraged debate, but when she stood up and paced the room with her hands in her pockets, the debate was over.

Mary held government positions in the administrations of four presidents: Jimmy Carter, Ronald Reagan, George H.W. Bush, and Bill Clinton, providing public service while, for the most part, still serving in her industrial position. She

was appointed to the National Science Board of the National Science Foundation by Jimmy Carter in 1980 and reappointed by Ronald Reagan in 1986. In 1988–91 she was the first woman to chair the board. In 1991 President Bush appointed her to the President's Council of Advisors on Science and Technology (PCAST).

Mary left AlliedSignal in 1993 to become Under Secretary of Commerce for Technology in the Clinton administration, serving until 1997. She led the Clean Car Initiative to develop a hybrid gas-electric car and encouraged the government to fund basic research and emerging technologies.

In 1997 she returned to academia as the Donaghey University Professor at the University of Arkansas at Little Rock, where she also became founding dean of the George W. Donaghey College of Engineering and Information Technology. On the occasion of her 10th anniversary as dean, Bill Clinton delivered a very moving tribute. She retired July 1, 2011, as dean emerita and special advisor to the university's chancellor for economic development.

In one of her last public roles, she spent more than 5 years, beginning in 2011, as the first board chair for the Little Rock Technology Park, which was developed as a multitenant, 38,000-square-foot startup village in the center of downtown Little Rock. "Dr. Good was a true pioneer and icon for women in science with an incredible resume of achievements. Her leadership as the first chairman of the Little Rock Technology Park Authority board was critical in getting the project from concept to reality. Like so many things in her career, she took on the perceived obstacles head-on and got things accomplished," Tech Park executive director Brent Birch said.

She also privately funded college tuitions for local students who were talented but lacked resources, providing an educational launchpad for many. This was hardly mentioned (even among family) as she never wanted to detract from these students' accomplishments.

Mary was the first woman elected to the board of the American Chemical Society in 1972. She went on to be elected chair in 1978 and 1980, president-elect in 1986, and president

in 1987. In 2001 she was elected president of the American Association for the Advancement of Science (AAAS). She was the founding chair of the Alliance for Science & Technology Research in America (ASTRA) in 2000. She was a strong proponent of STEM education and a supporter of women in technology, and was recognized as a national leader in this area.

Her myriad awards—too numerous to mention—include a number for which she was the first woman recipient:

- ACS Charles Lathrop Parsons Award for Public Service (1991)
- IRI Medal from the Industrial Research Institute (1991)
- Glenn T. Seaborg Medal (1996)
- ACS Priestley Medal (1997)
- AAAS Philip Hauge Abelson Prize (1998)
- Othmer Gold Medal (1998).

Other honors include

- Agnes Fay Morgan Research Award (1969)
- ACS Francis P. Garvan–John M. Olin Medal (1973)
- American Institute of Chemists Gold Medal (1983)
- Delmer S. Fahrney Medal of the Franklin Institute (1988)
- Heinz Award in Technology, the Economy, and Employment (2000)
- Vannevar Bush Award, the National Science Foundation's highest honor (2004).

And in addition to her election to the NAE, in 1994 she was elected a member of the Royal Society of Chemistry.

Mary died at her home in Little Rock on November 20, 2019, at the age of 88. She is survived by sons Billy and James, four grandsons, and two great-grandchildren.

As a leader in academia, industry, and government, Mary Good contributed to and championed research, technology, education, and diversity. She was a peerless role model for everyone, but especially for a generation of women scientists and engineers.