

BIOGRAPHY

Materials Science and Engineering, Applied Physics, Photon Science (SLAC)

B.S., Polytechnic Institute of Brooklyn, 1955

M.S., Polytechnic Institute of Brooklyn, 1957

Ph.D., Harvard University, 1962

Arthur Bienenstock is Professor emeritus of Photon Science, Special Assistant to the President for Federal Research Policy and Director of the Wallenberg Research Link at Stanford University. He received his B.S. and M.S. degrees in Physics from the Polytechnic Institute of Brooklyn, and his Ph.D. degree in Applied Physics from Harvard University in 1962.

He joined the Stanford faculty in 1967 and has served as Professor of Applied Physics, Professor of Materials Science and Engineering, Vice Provost for Faculty Affairs (1972-77), Director of the Stanford Synchrotron Radiation Laboratory (1978-97), Associate Director of the Stanford Linear Accelerator Center (1992-97) and Vice Provost for Research and Graduate Policy (2003-6). From November, 1997 to January, 2001, he served as Associate Director for Science of the Office of Science and Technology Policy while on leave from Stanford.

Prior to joining Stanford, Bienenstock was a National Science Foundation Postdoctoral Fellow at the Atomic Energy Research Establishment, Harwell, England (1962-3) and an Assistant Professor in Harvard University's Division of Engineering and Applied Physics (1963-7).

His early research involved a broad range of theoretical studies of crystalline solids, with some experimental and theoretical X-ray studies of poorly crystallized and amorphous systems. While still at Harvard, he became increasingly interested in the properties of amorphous materials and gradually shifted towards experimental studies of atomic arrangements in these materials.

This, in turn, led Bienenstock to recognize the great potential of X-ray synchrotron radiation (SR) for studying these arrangements. He turned his attention to the development of SR techniques for analysis of bulk and thin film amorphous materials, as well as to the development of increasingly powerful synchrotron radiation sources as director of the Stanford Synchrotron Radiation Laboratory (SSRL). His responsibilities as SSRL director led him increasingly into science policy and, subsequently, to the Office of Science and Technology Policy.

He has published over 100 papers in scientific and science policy journals, and his graduate students and postdoctoral associates hold major research and leadership positions throughout the world.

In 1968, Bienenstock was the first recipient of the Pittsburgh Diffraction Society's Sidhu Award. He received the Distinguished Alumnus Award of the Polytechnic Institute of New York Alumni Association in 1977, the Distinguished Service Award of the Department of Energy in 2005 and the Cuthbertson Award from Stanford University in 2009. He is a fellow of the American Academy of Arts and Sciences, the American Physical Society, the Institute of Physics, the American Association for the Advancement of Science and the California Council of Science and Technology.

He was awarded honorary PhDs by Polytechnic University (1998) and Lund University (2006). In March, 2010, he was elected a Foreign Member of the Swedish Royal Academy of Engineering Sciences. He was president of the American Physical Society (2008) and chair of the Council of Scientific Society Presidents (2010).

Bienenstock is married to Roslyn Bienenstock, a retired health professional. They have two children.

He was appointed to the National Science Board in 2012.