

Biography

Richard N. Zare is the Marguerite Blake Wilbur Professor in Natural Science at Stanford University with an appointment in the Department of Chemistry and a courtesy appointment in the Department of Physics. He is a graduate of Harvard University, where he received his B.A. degree in chemistry and physics in 1961 and his Ph.D. in chemical physics in 1964. In 1965 he became an assistant professor at the Massachusetts Institute of Technology, but moved to JILA, University of Colorado at Boulder in 1966, where he remained until 1969 while holding joint appointments in the Department of Chemistry, and the Department of Physics and Astrophysics. In 1969, he was appointed to a full professorship in the Department of Chemistry at Columbia University, becoming the Higgins Professor of Natural Science in 1975. In 1977 he moved to Stanford University, where he has been chair of their chemistry department since 2004. He has also been active in public service, serving on the National Science Board, the policy-setting body of the National Science Foundation, from 1992 to 1998, the last two years as its chair.

Zare has made fundamental contributions to chemical analysis. His earliest studies were on the use of laser-induced fluorescence (LIF) as a means to determine molecular structure and as a detection tool for chemical reaction products. He went on to use LIF for the detection of mold metabolites (aflatoxins) separated by chromatography, for detecting and quantitating analytes separated by capillary electrophoresis, and for measuring the behavior of single molecules in solutions at room temperature. He has consistently blazed new trails for chemical analysis, which has resulted in a number of awards including the National Medal of Science in 1983, the Welch Award in Chemistry in 1999, the Wolf Prize in Chemistry in 2005, and the Priestley Medal in 2010. He is also recognized for his teaching and mentoring, having received the James Flack Norris Award for Outstanding Achievement in the Teaching of Chemistry (2004), the George C. Pimentel Award in Chemical Education (2008), and the Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring (2009).