

Richard N. Zare: Curriculum Vitae

(abridged version)

BIOGRAPHICAL INFORMATION

Born: Cleveland, Ohio, November 19, 1939
Married: Susan Shively Zare
Children: Bethany Jean; Bonnie Sue; Rachel Amdur

EDUCATION AND PROFESSIONAL EXPERIENCE

1961 B.A. (Chemistry and Physics), Harvard University
1961-1963 Postgraduate work, University of California at Berkeley
1964 Ph.D. (Chemical Physics), Harvard University, (NSF Predoctoral Fellow)
1964-1965 Postdoctoral Research Associate, Joint Institute for Laboratory Astrophysics (JILA), University of Colorado
1965-1966 Assistant Professor, Department of Chemistry, Massachusetts Institute of Technology
1966-1968 Assistant Professor, Department of Physics and Astrophysics, University of Colorado
1968-1969 Associate Professor, Department of Physics and Astrophysics and Department of Chemistry, University of Colorado
1969-1977 Professor, Department of Chemistry, Columbia University
1975-1977 Higgins Professor of Natural Science, Columbia University
1977- Professor, Department of Chemistry, Stanford University
1980-1985 Shell Distinguished Professor of Chemistry, Stanford University
1982 Christensen Fellow, St. Catherine's College, Oxford University
1984-1986 Stanford University Fellow
1985- Fellow Adjoint, Joint Institute for Laboratory Astrophysics, University of Colorado
1987- Marguerite Blake Wilbur Professor in Natural Science, Stanford University
1992- Professor of Physics, Stanford University
2006- Howard Hughes Medical Institute Professor, Stanford University

HONORS AND AWARDS

2017 Othmer Gold Medal, Chemical Heritage Foundation, Philadelphia, Pennsylvania
2016 Honorary Doctorate, University of Edinburgh, Edinburgh, Scotland
2013 Honorary Doctorate, University of South Florida, Tampa, Florida
2012 The International Science and Technology Cooperation Award of the People's Republic of China
2012 The World Academy of Sciences Lecture Medal
2012 The Torbern Bergman Medal, The Swedish Chemical Society, The Analytical Division
2011 Honorary Membership into the Japan Society for Analytical Chemistry (JSAC)
2011 Einstein Professorship of the Chinese Academy of Sciences
2011 King Faisal International Prize in Science (shared with George M.

Whitesides)

2010 R. B. Bernstein Award in Stereodynamics (shared with R.D. Levine)

2010 Honorary Fellow of the Chinese Chemical Society

2010 BBVA Foundation Frontiers of Knowledge Award in the Basic Sciences category (shared with Michael E. Fisher)

2010 Priestley Medal, American Chemical Society

2010 Theodore William Richards Award, Northeastern Section of the American Chemical Society

2009 Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring (PAESMEM), U.S. Office of Science and Technology Policy

2009 F. A. Cotton Medal for Excellence in Chemical Research, Texas A&M University, Department of Chemistry, and Texas A&M Section, American Chemical Society

2008 George C. Pimentel Award in Chemical Education, American Chemical Society

2007 H. Julian Allen Award, in recognition of co-authorship of "UV Irradiation of Polycyclic Aromatic Hydrocarbons in Ices: Production of Alcohols, Quinones, and Ethers," *Science* **283**, 1135-1138 (1999), NASA Ames Research Center

2007 Dudley R. Herschbach Award for Excellence in Research in the field of Collision Dynamics, Dynamics of Molecular Collisions Meeting, Santa Fe

2007 Honorary Doctorate, Chalmers Institute of Technology, Göteborg, Sweden

2006 Oesper Award, University of Cincinnati and Cincinnati Section of the American Chemical Society

2005 Chandler Medal, Department of Chemistry, Columbia University, Pupin Medal "for service to the nation", Columbia University School of Engineering

2005 Wolf Prize in Chemistry, Israel

2005 Nichols Medal, New York Section of the American Chemical Society

2004 James Flack Norris Award for Outstanding Achievement in the Teaching of Chemistry, Northeastern Section of the American Chemical Society

2003 Laurance and Naomi Carpenter Hoagland Prize for Excellence in Undergraduate Education, Stanford University

2003 Honorary Doctorate, Université P. Sabatier, Toulouse, France

2002 Distinguished Chemist Award, American Chemical Society Sierra Nevada Section

2002 Honorary Doctorate, Hunan University

2000-2001 California Separation Science Society (CaSSS) Scientific Achievement Award

2000 Madison Marshall Award, American Chemical Society, North Alabama

2001 Honorary Doctorate, D Univ, The University of York, York, UK

2001 Honorary Doctorate, State University of West Georgia

2001 Faraday Medal & Lectureship, Royal Society of Chemistry

2001 Charles Lathrop Parsons Award, American Chemical Society, "to recognize outstanding public service by a member of the American Chemical Society"

2000 Nobel Laureate Signature Award for Graduate Education, American Chemical Society

2000 Arthur L. Schawlow Prize in Laser Science, American Physical Society

2000 Doctor of Philosophy, honoris causa, Uppsala University, Uppsala, Sweden

1999 The Welch Award in Chemistry

1999 Doctor of Science, honoris causa, Columbia University

1999 E. Bright Wilson Award in Spectroscopy

1998 Distinguished Service Award, National Science Board

1998 Centennial Medal, Graduate School of Arts and Sciences, Harvard University

1998 G. M. Kosalapoff Award, Auburn Section, American Chemical Society

1998 ACS Award in Analytical Chemistry

1997 Eastern Analytical Symposium Award for Outstanding Achievements in the Field of Analytical Chemistry

1997 Allan V. Cox Medal for Faculty Excellence Fostering Undergraduate Research, Stanford University

1997 NASA Exceptional Scientific Achievement Award

1997 Phi Beta Delta (Honorary Member)

1997 California Scientist of the Year

1996 The Bing Fellowship Award, "to recognize excellence in teaching and commitment to undergraduate education"

1995 ACS Division of Analytical Chemistry Award in Chemical Instrumentation

1993 Dannie-Heineman Preis, Akademie der Wissenschaften zu Göttingen

1993 Doctor of Science, Honorary Degree, Eidgenössische Technische Hochschule Zürich, Switzerland

1993 The Pauling Award, Puget Sound, Oregon and Portland Sections of the American Chemical Society

1993 The Harvey Prize, Technion, Israel Institute of Technology

1993 Doctor of Science, Honorary Degree, Northwestern University

1991 National Academy of Sciences Award in Chemical Sciences, for "pioneering laser-based techniques, deep insights, and seminal contributions, which have influenced every facet of chemical reaction dynamics"

1991 Peter Debye Award in Physical Chemistry, American Chemical Society

1990 Willard Gibbs Medal, Chicago Section, American Chemical Society

1990 Doctor of Science, Honorary Degree, University of Arizona

1990 ISCO Award for Significant Contributions to Instrumentation for Biochemical Separations

1987 Dean's Award for Excellence in Teaching, Stanford University

1986 Kirkwood Award Medal, Yale University, New Haven Section of the American Chemical Society

1986 Michelson-Morley Award, Case Institute of Technology, Case Western Reserve

- University
- 1985 Irving Langmuir Prize, American Physical Society, for "seminal innovations in developing many experimental and theoretical processes"
- 1985 Harrison Howe Award, Rochester Section, American Chemical Society
- 1985 Remsen Award, Maryland Section, American Chemical Society
- 1984 Evans Award, The Ohio State University
- 1983 National Medal of Science, for "seminal contributions to molecular spectroscopy, photochemistry, and chemical reaction dynamics, especially for his incisive theoretical methods and the development of the experimental technique of laser-induced fluorescence"
- 1983 Spectroscopy Society of Pittsburgh Award
- 1981 Earle K. Plyler Prize, American Physical Society
- 1979 Michael Polanyi Medal, presented at the Faraday Discussions of the Chemistry Society, Birmingham, England
- 1974 Fresenius Award, given by Phi Lambda Upsilon Honorary Chemical Society to the most outstanding chemist under age 35
- 1967-1969 Alfred P. Sloan Fellowship
- 1961 Phi Beta Kappa

MEMBERSHIPS, COMMITTEES, BOARDS, ETC.

- 2012 Member, Advisory Board, School of New Sciences, DGIST, Daegu, South Korea
- 2012 Honorary Professorship, Shanghai Jiao Tong University (SJTU)
- 2012 Chair, COSEMPUP (Committee on Science, Engineering, Medicine, and Public Policy) of the National Academy of Sciences, the National Academy of Engineering, and the National Academy of Medicine
- 2011 Member, Executive Committee, Board of Directors, Wonderfest, Inc.
- 2010 Chair, International Evaluation Committee, National Science Foundation of China
- 2009 Fellow, TWAS, Academy of Sciences for the Developing World
- 2009 Fellow, American Chemical Society
- 2008 Honorary Fellow, Indian Academy of Sciences
- 2008 Fellow, Michelle R. Clayman Institute for Gender Research
- 2008 Fellow, Association for Women in Science
- 2007 Honorary Fellow, Chemical Research Society of India (CRSI)
- 2007 Advisor, Camille and Henry Dreyfus Foundation
- 2006 President, Molecular Frontiers Foundation
- 2006 Senior Presidential Advisor, Hunan University
- 2006 Chair, Academic Advisory Committee, Biomedical Engineering Center, Hunan University
- 2006 Professor of Biomedical Engineering Center, Hunan University
- 2006-2008 Faculty Affiliate, Michelle R. Clayman Institute for Gender Research
- 2004 Member of the European Academy of Sciences

2004 Foreign Member, Swedish Royal Academy of Engineering Sciences (IVA)
2004 Foreign Member, Chinese Academy of Sciences (CAS)
2004 Honorary Member, The World Jewish Academy of Sciences
2001 Honorary Fellow, Royal Society of Chemistry
1999-2001 Foreign Council Member, Institute for Molecular Science (Japan)
1999 Foreign Member, Royal Society (London)
1997-2000 Chairman, President's National Medal of Science Selection Committee
1997 Fellow, California Council on Science and Technology
1995 Chairman of the Board of Directors, Annual Reviews Inc.
1995-1998 Council Member, National Academy of Sciences
1992-1995 Chair, Commission on Physical Sciences, Mathematics, and Applications,
National Research Council
1996-1998 Member, National Science Board, 1992-1998; Chairman, National Science
Board
1992-1995 Vice-Chair of Board of Directors, Annual Reviews, Inc.; Chairman of the Board
of Directors, Annual Reviews Inc., 1995-
1991 Honorary Fellow, California Academy of Sciences
1991 Fellow, Optical Society of America
1991 Member, American Philosophical Society
1989-1992 Member, Government-University-Industry Research Roundtable of the National
Academy of Sciences
1987 Chairman, Panel on Basic Science and Technology Centers, National Academy of
Sciences
1985-1987 Member, Directed Energy Weapons study panel, American Physical Society
(APS)
1985 Fellow, American Association for the Advancement of Science
1985-1986 Chairman, Division of Chemical Physics (DCP) American Physical Society
(APS) Vice-Chairman, 1984-1985
1983-1985 Member, Committee on Atomic and Molecular Science (CAMS), National
Research Council
1982-1985 Editor, Chemical Physics Letters
1980-1982 Chairman, National Science Foundation Advisory Panel (Chemistry
Division)
1976 Member, National Academy of Sciences
1976 Member, American Academy of Arts and Sciences
1969 Fellow, The American Physical Society
1969 Non-Resident Fellow, Joint Institute of Laboratory Astrophysics
Member, The Chemical Society (London)