

**ROBERT SAMUEL LANGER**  
Curriculum Vitae

**DATE & PLACE OF BIRTH** August 29, 1948, Albany, New York

**EDUCATION**

1974 Sc.D., Chemical Engineering, MIT

1970 B.S. (with distinction) Chemical Engineering, Cornell University

**AWARDS**

2018 Leadership Award for Historic Scientific Advancement (American Chemical Society)  
2018 Honorary Doctorate, University of Limerick, Ireland  
2018 Honorary Doctorate, University of Illinois  
2017 Named Number 1 Translational Researcher in the World (Nature Biotechnology)  
2017 Kabiller Prize in Nanoscience and Nanomedicine  
2017 Honorary Doctorate, National Institute of Astrophysics, Optics and Electronics, Mexico  
2017 Memorial Sloan Kettering Medal for Outstanding Contributions to Biomedical Research  
2017 Honorary Degree, Gerstner Graduate School, Memorial Sloan Kettering Cancer Center  
2017 Tetelman Fellow, Yale University  
2016 Honorary Degree, Karolinska Institutet, Sweden  
2016 Honorary Degree, Hong Kong University of Science and Technology, Hong Kong  
2016 Raymond and Beverly Sackler Award for Sustained National Leadership (Research!America)  
2016 Benjamin Franklin Medal in Life Science (Franklin Institute)  
2016 Irving Weinstein Foundation Distinguished Lecture Award (American Association for Cancer Research)  
2016 Honorary Degree, Carnegie Mellon University  
2016 European Inventor Award, Non-European Countries (European Patent Office)  
2015 Queen Elizabeth Prize for Engineering  
2015 Hoover Medal (American Society of Mechanical Engineers)  
2015 Scheele Award (Swedish Pharmaceutical Society)  
2015 Kazemi Award for Research Excellence in Biomedicine  
2015 Honorary Degree, University of Maryland  
2015 Honorary Degree, Hanyang University (South Korea)  
2015 Honorary Degree, University of New South Wales (Australia)  
2015 Cornell Entrepreneur of the Year  
2014 Kyoto Prize in Advanced Technology  
2014 Breakthrough Prize in Life Sciences  
2014 Biotechnology Heritage Award (Chemical Heritage Foundation)  
2014 Chemical Pioneer Award (American Institute of Chemists)  
2014 Honorary Degree, Drexel University  
2014 Honorary Degree, University of Western Ontario (Canada)  
2014 ETH Zurich Chemical Engineering Medal  
2014 Elected a Foreign Corresponding Member of the Austrian Academy of Sciences  
2014 Mack Memorial Award (Ohio State University)  
2013 Wolf Prize in Chemistry (Wolf Foundation)  
2013 United States National Medal of Technology and Innovation (for 2011)  
2013 RUSNANOPRIZE International Prize in Nanotechnology  
2013 Fellow, American Association for the Advancement of Science  
2013 Distinguished Investigator Award (American College of Clinical Pharmacology)  
2013 Honorary Fellow Award (American College of Clinical Pharmacology)  
2013 Honorary Degree, Boston University  
2013 Honorary Degree, Tel Aviv University  
2013 Honorary Degree, Ben Gurion University  
2013 Julio Palmaz Award for Innovation in Healthcare and the Biosciences (BioMed SA)  
2013 Industrial Research Institute Medal  
2013 IEEE Medal for Innovations in Healthcare Technology

2013 Founders Award (Society of Biomaterials)  
2013 MDEA Lifetime Achievement Award  
2012 Scientist of the Year (R&D Magazine)  
2012 Elected to National Academy of Inventors (Charter Fellow)  
2012 Priestley Medal (American Chemical Society)  
2012 Perkin Medal (Chemical Heritage Foundation)  
2012 Terumo International Prize (Japan)  
2012 Wilhelm Exner Medal (Austria)  
2012 Fellow, American Institute of Chemical Engineers  
2012 Feodor Lynen Award (Nature Biotechnology)  
2011 Economist Innovation Award for Bioscience  
2011 Warren Alpert Foundation Prize (Warren Alpert Foundation/Harvard Medical School)  
2011 Walker Prize (Boston Museum of Science)  
2011 Apple Award (American Spinal Injury Association/Shepherd Center/Thomas Land Publishers Inc.)  
2011 Honorary Degree, Bates College  
2011 Frontier of Science Award (Society of Cosmetic Chemists)  
2011 Fellow (American Chemical Society)  
2010 Elected International Fellow (Royal Academy of Engineering)  
2010 Founders Award (National Academy of Engineering)  
2010 Honorary Degree, Rensselaer Polytechnic Institute  
2010 Honorary Degree, Willamette University  
2010 Robert Fletcher Award (Thayer School of Engineering, Dartmouth College)  
2010 EMBS Academic Career Achievement Award (IEEE Engineering in Medicine and Biology Society)  
2010 Elected to the Controlled Release Society College of Fellows  
2010 Founding POLY Fellow (Division of Polymer Chemistry, American Chemical Society)  
2009 Honorary Degree, Harvard University  
2009 University of California at San Francisco Medal  
2009 Honorary Degree, Mount Sinai School of Medicine  
2009 Distinguished Chemist Award (New England Institute of Chemists)  
2009 Biomedical Research Leaders Award (Massachusetts Society for Medical Research)  
2008 Millennium Technology Prize  
2008 Max Planck Research Award  
2008 Prince of Asturias Award for Technical and Scientific Research  
2008 Elected Foreign Academic Member (Royal Academy of Pharmacy of Spain)  
2008 Founders Award (American Institute for Chemical Engineers)  
2008 Innovation in Health and Technology Award (Boston History and Innovation Collaborative)  
2008 Acta Biomaterialia Gold Medal (Acta Materialia)  
2008 Named one of the 100 Top Chemical Engineers of the 20<sup>th</sup> Century (AIChE)  
2007 United States National Medal of Science (for 2006)  
2007 Chemistry of Materials Award (American Chemical Society)  
2007 Herman F. Mark Award (American Chemical Society, Polymer Chemistry Division)  
2007 Honorary Degree, Yale University  
2007 Wenig Memorial Award for Outstanding Achievement in Drug Delivery  
2007 First Prize of Scientific Award (BMW Group)  
2007 Elected to the Biotechnology Hall of Fame  
2006 Elected to the National Inventors Hall of Fame  
2006 Honorary Degree, Northwestern University  
2006 Honorary Degree/Commencement Address, Albany Medical College  
2006 Bailey Award (American Institute of Chemical Engineers)  
2005 Von Hippel Award (Materials Research Society)  
2005 Albany Medical Center Prize in Medicine and Biomedical Research  
2005 Dan David Prize (Materials Science)  
2005 Honorary Degree, Uppsala University  
2005 Honorary Degree/Commencement Address, Pennsylvania State University  
2005 Honorary Degree, University of Nottingham

2005 Lifetime Achievement Award (Society for *In Vitro* Biology)  
2005 Rainer Hoffmann Product through Science Award (Controlled Release Society)  
2005 Technology Innovation and Development Award (Society of Biomaterials)  
2005 Washington Award (Western Society of Engineers)  
2004 Charles F. Kettering Prize (General Motors Cancer Research Foundation)  
2004 Nelson Taylor Award (Pennsylvania State University)  
2003 Heinz Award for Technology, Economy and Employment  
2003 Harvey Prize in Science and Technology and Human Health  
2003 John Fritz Medal (American Association of Engineering Societies)  
2003 Elected to the Academy of Achievement (Golden Plate Award)  
2003 Honorary Degree, University of Liverpool, England  
2002 Dickson Prize for Science (Carnegie Mellon University)  
2002 Charles Stark Draper Award (National Academy of Engineering)  
2002 Othmer Gold Medal (Chemical Heritage Foundation)  
2002 Nagai Innovation Award (Controlled Release Society)  
2002 Honorary Degree, Hebrew University of Jerusalem  
2002 Herman Schwan Award (University of Pennsylvania)  
2001 Harrison Howe Award (American Chemical Society)  
2000 Honorary Degree, Catholic University of Louvain, Belgium  
2000 Glaxo Wellcome International Achievement Award (Royal Pharmaceutical Society of Great Britain)  
2000 Millennial Pharmaceutical Scientist Award (Millennial World Congress of Pharmaceutical Sciences)  
2000 First Pierre Galletti Award (American Institute of Medicine & Biological Engineering)  
2000 Wallace Carothers Award (American Chemical Society, Delaware Section)  
1999 American Chemical Society Award in Polymer Chemistry  
1999 Esselen Award (American Chemical Society, Northeast Section)  
1999 Ebert Prize (American Pharmaceutical Association)  
1999 G.N. Lewis Medal (University of California at Berkeley)  
1998 Outstanding Pharmaceutical Paper Award (Controlled Release Society)  
1998 Lemelson-MIT Prize for Invention and Innovation  
1998 The Nagai Foundation Tokyo International Prize  
1997 Killian Faculty Achievement Award (MIT)  
1997 Wiley Medal (U.S. Food and Drug Administration)  
1997 Honorary Degree, Technion - Israel  
1996 Canada Gairdner International Award (Canada Gairdner Foundation)  
1996 Honorary Degree, Eidgenossische Technische Hochschule-ETH, Switzerland  
1996 William Walker Award (American Institute of Chemical Engineers)  
1996 Society of Plastics Engineers International Award  
1996 Ebert Prize (American Pharmaceutical Association)  
1996 Elected a Fellow of Biomaterials Science and Engineering  
1996 Avis Distinguished Visiting Professor (University of Tennessee)  
1995 International John W. Hyatt Service to Mankind Award (Society of Plastics Engineers)  
1995 Ebert Prize (American Pharmaceutical Association)  
1995 Elected a Fellow (American Association of Pharmaceutical Scientists)  
1995 PEL Associates Award (PEL Associates, Groton, Connecticut)  
1994 Elected to the American Academy of Arts and Sciences  
1994 Elected a Fellow, Society of Biomaterials  
1993 Distinguished Pharmac. Scientist Award (Highest Honor of the Amer. Assoc. of Pharm. Scient.)  
1992 Elected to the National Academy of Sciences  
1992 Elected to the National Academy of Engineering  
1992 American Chemical Society Award for Applied Polymer Science (Phillips Award)  
1992 Elected a Founding Fellow, American Institute of Medical and Biological Engineering  
1992 Outstanding Pharmaceutical Paper Award (Controlled Release Society)  
1992 Perlman Memorial Award (American Chemical Society, Biochemical Technology Division)  
1991 Organon Teknika Award (European Society for Artificial Organs)  
1991 Charles M.A. Stine Award in Materials Science and Eng. (American Institute of Chemical Engineers)

- 1990 Professional Progress Award (American Institute of Chemical Engineers)
- 1990 Clemson Award for Basic Research (Society for Biomaterials)
- 1990 Outstanding Pharmaceutical Paper Award (Controlled Release Society)
- 1989 Elected to the National Academy of Medicine
- 1989 Creative Polymer Chemistry Award (American Chemical Society, Polymer Division)
- 1989 Outstanding patent in Massachusetts and one of the twenty outstanding patents in the U.S. (Intellectual Property Owners, Inc.)
- 1989 Founders Award for Outstanding Research (Controlled Release Society)
- 1988 Elected to the Gordon Conference Research Council
- 1988 Elected Chairman, Gordon Conference on Drug Carriers in Biology and Medicine
- 1986 Food, Pharmaceutical and Bioengineering Award (American Institute of Chemical Engineers)
- 1983 Outstanding Paper, Institute of Electrical and Electronic Engineering
- 1982 Paper Listed as One of the Outstanding Papers of the Year, CHEMTECH
- 1982 Recipient of the first Dorothy W. Poitras Chair, MIT
- 1982 Outstanding Teacher Award, MIT Graduate Student Council

### **NAMED LECTURES**

- 2018 Suslick-Sessler Lecture in Materials Chemistry, University of Illinois
- 2018 Henry Louis Smith Lecturer (Davidson College)
- 2017 Tetelman Lecturer (Yale University)
- 2017 Stetson Lecturer (University of Vermont Larner College of Medicine)
- 2017 Deloitte Endowed Lecturer (Dana-Farber Cancer Institute)
- 2017 Alfred Stracher Memorial Lecturer (SUNY Downstate Medical Center)
- 2017 Bernal Distinguished Lecturer (University of Limerick)
- 2017 Commencement Address (Gerstner Graduate School, Memorial Sloan Kettering Cancer Center)
- 2017 Anderson Distinguished Lecturer (University of Virginia School of Medicine)
- 2016 Inaugural Distinguished Lecturer in Bioengineering (University of California - Berkeley)
- 2016 AACR-Irving Weinstein Foundation Award Distinguished Lecturer (American Association for Cancer Research)
- 2016 Inaugural Frank and Grace Yin Distinguished Lecturer (Washington University)
- 2016 Hunt Lecturer (Wound Healing Society Foundation)
- 2015 Robert E. Gross Lecturer (American Pediatric Surgical Association 46<sup>th</sup> Annual Meeting)
- 2015 Ørsted Lecturer (University of Copenhagen)
- 2015 Eli Ruckenstein Lecturer (University at Buffalo, State University of New York)
- 2015 Baker Symposium Lecturer (Cornell University)
- 2015 Lerner Lecturer (Cleveland Clinic)
- 2015 Barre Lecturer (University of Montreal)
- 2015 Amundson Lecturer (University of Houston)
- 2015 Irving Shain Lecturer (University of Wisconsin – Madison)
- 2014 Lindahl Lecturer (Napa Pain Institute)
- 2014 Pittcon Lecturer/Analytical Seminar Series (University of Pittsburgh)
- 2014 Novartis/Drug Discovery Institute Lecturer (University of California – San Diego)
- 2014 Commencement Address (University of Western Ontario)
- 2014 Commencement Address (Drexel University)
- 2014 Darsh Wasan Lecturer (Illinois Institute of Technology)
- 2014 52<sup>nd</sup> Robbins Lecture Series Lecturer (Pomona College)
- 2014 George S. Hammond Lecturer (Bates College)
- 2014 Edward Mack, J. Memorial Award Lecturer (Ohio State University)
- 2013 Axalta Lecturer (University of Pennsylvania)
- 2013 Inaugural Thomas H. Chilton Lecturer (DuPont Central Research and Development)
- 2013 BC<sup>2</sup> Annual Lecturer (Wellesley College)
- 2013 Warren L. McCabe Lecturer (North Carolina State University)
- 2013 Commencement Address (Boston University School of Engineering)
- 2013 Lucas Lecturer (Colorado School of Mines)
- 2013 Reed Izatt and James Christensen Lecturer (Brigham Young University)
- 2013 Prof. Dame Julia Polak Inaugural Lecturer (Imperial College)

2012 Gladstone Distinguished Lecturer (Gladstone Institutes/University of California-San Francisco)  
2012 Eliahu Caspi Memorial Lecturer (University of Massachusetts Medical School)  
2012 Kavli Foundation Innovation in Chemistry Lecturer (American Chemical Society)  
2011 Commencement Address (Johns Hopkins Business School)  
2011 Commencement Address (University of California Berkeley School of Chemistry)  
2011 Commencement Address (Bates College)  
2011 Class Day Speech (EPFL, Switzerland)  
2011 Kroc Lectureship (Joslin Diabetes Center)  
2011 Knight Lectureships (University of Akron)  
2011 Bullard Lectureship (Uniformed Services University)  
2011 Dean's Lecturer (University of Maryland)  
2010 Herman S. Bloch Memorial Lecture (University of Chicago)  
2010 Investiture Lecturer (Thayer School of Engineering, Dartmouth College)  
2010 Judah M. Folkman Lecturer (Children's Hospital, Boston)  
2010 Allan S. Hoffman Lecturer (University of Washington)  
2010 Storer Life Sciences Lecturer (University of California, Davis)  
2010 Dohlman Visiting Professorship Lecturer (Massachusetts Eye and Ear Institute)  
2009 Cecil Brown Lecturer (American Chemical Society)  
2009 Melvin L. Samuels Lecturer (University of Texas MD Anderson Cancer Center)  
2008 Isadore Rosenberg Lecturer (Metrowest Medical Center)  
2008 Invitrogen Lecturer (University of California, San Diego)  
2008 Rohm and Hass Lecturer (University of California Berkeley)  
2007 Findling Lecturer (Mayo Clinic)  
2007 W.M. Keck Distinguished Lecturer (Lehigh University)  
2007 Alexander Rich Lecturer (Massachusetts Institute of Technology)  
2007 William Shucart Lecturer (Tufts University)  
2007 Ford Lecturer (Case Western University)  
2006 Commencement Address (Albany Medical College)  
2006 Distinguished Lecturer (University of Pennsylvania School of Medicine)  
2006 Weiss Lecturer (Northeastern University)  
2006 Commencement Address (Northwestern University)  
2005 Hodgins Lectureship (McMaster University)  
2005 John and Donna Hall Lectureship (Vanderbilt University)  
2005 Keewaunee Lecturer (Duke University)  
2005 Gavel Clinical Research Lecturer (The Forsyth Institute)  
2005 Talamo Lecturer (Harvard Medical School)  
2005 Commencement Address (Uppsala University)  
2005 Commencement Address (Pennsylvania State University)  
2005 Commencement Address (University of Nottingham)  
2004 Presidential Lecturer (University of Texas Health Science Center, San Antonio)  
2004 Pirkey Lectureship in Chemical Engineering (University of Texas, Austin)  
2004 Evans Memorial Award Lectureship (Ohio State University)  
2004 Benjamin Zweifach Distinguished Lecturer (City College of New York)  
2004 Nelson Leonard Lecturer (University of Illinois)  
2004 Donald Katz Lecturer (University of Michigan)  
2003 Founders Lecturer (University of Wisconsin)  
2003 Rohm and Hass Lecturer (Stanford University)  
2003 Tripathy Endowed Memorial Lecture (University of Massachusetts, Lowell)  
2003 Skinner Memorial Lecture (Northwestern University)  
2003 Maurice and Yetta Glicksman Lecturer (Brown University)  
2003 FMC Lecturer (Princeton University)  
2003 Seymour J. Kreshover Lecturer (National Institutes of Health)  
2003 Whitaker Lecturer (American Society of Artificial Organs)  
2002 Feigenbaum - Levine Lecturer (Beth Israel Hospital at Harvard Medical School)  
2002 Distinguished Lecturer (University of Louisville)

2002 Institute Lecturer (American Institute of Chemical Engineers)  
 2001 Ulliot Lecturer (Chemical Heritage Foundation)  
 2001 Clapp Lecturer (Brown University)  
 2001 Julian Smith Lecturer (Cornell University)  
 2001 Mason Lecturer (Stanford University)  
 2001 Distinguished Lecturer (Carnegie Mellon)  
 2000 Herman Beerman Lecturer (Society for Investigative Dermatology)  
 2000 Millennial Lecturer (University of Liverpool)  
 2000 Bayer Lecturer (University of Pittsburgh)  
 2000 Bayer Stein Honorary Lecture (University of Massachusetts at Amherst)  
 2000 William G. Lowrie Lectureship (The Ohio State University)  
 2000 Frank T. Gucker Lecturer (Indiana University)  
 2000 First Patten Distinguished Lectureship (University of Colorado at Boulder)  
 1999 Beckman Lecturer (University of Illinois at Urbana)  
 1999 Reilly Lectureship (Notre Dame University)  
 1998 Wagner Lectureship (University of Michigan)  
 1998 Ewing Halsell Foundation Lectureship (University of Texas Health Center, San Antonio)  
 1998 Robert R. Linton Distinguished Lecture; New England Society for Vascular Surgery  
 1998 Marcus Memorial Lecturer (Washington University, St. Louis)  
 1998 Joseph Stokes, Jr. Lectureship (University of Pennsylvania)  
 1997 William J. Rashkind Memorial Lecture (American Heart Association)  
 1997 Rohm and Haas Lecturer in Materials Chemistry (University of North Carolina)  
 1996 The Berkeley Lecturer (University of California, Berkeley)  
 1995 Distinguished Medical Scientist Lecturer (Ohio State University)  
 1995 Lacy Lecturer (California Institute of Technology)  
 1995 Ralph Peck Memorial Lecturer (Illinois Institute of Technology)  
 1994 Whitaker Distinguished Lecturer (Biomedical Engineering Society)  
 1994 Miles Lecturer (Cornell University)  
 1994 Feigenbaum Memorial Lecturer (Beth Israel Hospital, Harvard Medical School)  
 1993 Kurt Wohl Memorial Lecturer (University of Delaware)  
 1993 Priestley Lecturer (Penn State University)  
 1992 Kelly Distinguished Lecturer (Purdue University)  
 1992 Miles Distinguished Lecturer (University of Pittsburgh)  
 1991 Louis W. Busse Lecturer (University of Wisconsin)  
 1991 Sidney Riegelman Lecturer (University of California, San Francisco)  
 1991 Ashton-Cary Lecturer (Georgia Institute of Technology)  
 1991 Sandoz-Dorsey Lecturer (Ohio State University)  
 1989 Walter F. Enz Lecturer (University of Kansas)  
 1988 Robert Rushmer Lecturer (University of Washington, Seattle)  
 1988 1st Presidential Lecturer, Controlled Release Society (Basel, Switzerland)  
 1987 Biomedical Research Council Lecturer (University of Michigan)  
 1986 Elmer L. Linseth Lecturer (Case Western Reserve University)  
 1983 Merck, Sharpe and Dohme Lecturer (University of Puerto Rico)

## **EMPLOYMENT**

7/09-present David H. Koch Institute Professor, Massachusetts Institute of Technology  
 2/05-6/09 Institute Professor, Massachusetts Institute of Technology  
 7/88-1/05 Kenneth J. Germeshausen Professor of Chemical and Biomedical Engineering, MIT Department of Chemical Engineering; Whitaker College of Health Sciences, Technology, and Management; and the Harvard-MIT Division of Health Sciences and Technology  
 7/99-present Senior Lecturer on Surgery, Harvard University, Harvard Medical School  
 7/85-6/88 Professor of Biochemical Engineering, MIT, Department of Applied Biological Sciences, Whitaker College of Health Sciences, Technology, and Management, and the Harvard-MIT Division of Health Sciences and Technology

7/81-6/85 Associate Professor of Biochemical Engineering, MIT, Department of Nutrition and Food Sciences and the Whitaker College of Health Sciences Technology, and Management, and the Harvard-MIT Division of Health Sciences and Technology

7/78-6/81 Assistant Professor of Nutritional Biochemistry, MIT, Department of Nutrition and Food Sciences

7/77-6/78 Assistant Professor of Nutritional Biochemistry, MIT (Visiting), Department of Nutrition & Food Sciences

7/74-present Research Associate, Children's Hospital Medical Center, Harvard Med. School, Boston, MA

9/72-6/74 Research Assistant, MIT

9/72-8/73 Chairman, Math and Science Departments, The Group School, Cambridge, MA

## PROFESSIONAL AND ACADEMIC ORGANIZATIONS

Controlled Release Society (Elected President, 1991-1992) (Elected to Board of Governors, 1981-1985; Chairman, Regulatory Affairs Committee, 1985-1989).

Biomedical Engineering Society (Elected to the Board of Directors, 1991-1994)

American Institute of Chemical Engineers (Food, Pharmaceutical and Bioengineering Division)

American Chemical Society (Polymer Division)

American Society of Artificial Internal Organs (Program Committee 1984-1987; Membership Committee (1991-93)

International Society of Artificial Internal Organs

Scientific Advisory Board, Department of Chemical Engineering, Georgia Institute of Technology (1992-2000)

Society for Biomaterials (Elected a Fellow, 1994)

American Association of Pharmaceutical Scientists (Elected a Fellow, 1995)

American Institute of Medical and Biological Engineers (Elected Founding Fellow, 1992; Elected Chair, College of Fellows, 1995)

The Science Board, the United States Food and Drug Administration (FDA) (highest Advisory Board of the FDA), 1995--2002 (Chair from 1999 -- 2002)

Scientific Advisory Board, Schepens Eye Institute, Harvard Medical School (1995-1998)

Board of Scientific Counselors, National Institutes of Health Center for Research Resources (1996-2001)

Scientific Advisory Board, Division of Chemistry and Chemical Engineering, California Institute of Technology (1999-)

Scientific Advisory Board, Department of Chemical Engineering, Princeton University (1999-)

Board of Overseers, Othmer Research Institute, Brooklyn Polytechnic Institute (2001-)

Board of Directors, McGovern Institute, Massachusetts Institute of Technology (2001-)

Board of Directors, Whitehead Institute (2003-)

Chair, Killian Award Committee (2004)

World Economic Forum, Technology Pioneers Selection Committee (2010-)

## COURSES TAUGHT

20.002U	(1977 - 1988)	Laboratory in Applied Biology
20.S35	(1979 - 1988)	Pharmacological Engineering
20.11G	(1979 - 1988)	Analytical Practices in Biochemistry
HST 110	(1979 - 1981)	Renal Pathophysiology
20.113	(1987 - 1988)	Problems in Biotechnology
10.02J	(1989 - )	Biotechnology and Engineering
10.361	(1989 - )	Integrated Chemical Engineering
10.13	(1989 -1991)	Thermodynamics
10.984	(1990 - )	Biomedical Applications of Chemical Engineering
10.26	(1992 - )	Senior Chemical Engineering Project Laboratory

## MIT ACTIVITIES

1972-73, 80- Board of Trustees, MIT Community Service Fund

1972-74 Committee on Preprofessional Advising and Education, MIT

1972-74 Steering Committee, Urban Action, MIT

1977-85 Freshman Advisor

1978- Undergraduate Advisor

1980- Premedical Advisory Council, MIT

1977-80 Seminar Committee, Department of Applied Biological Sciences, MIT

1978-80 Asinari Committee, MIT

1979-88 Undergraduate Affairs Committee, Department of Applied Biological Sciences, MIT (Chairman, 1981-1985)

1980-84 MIT-Wellesley Upward Bound Joint Steering Committee

1981-82, 84-85 Financial Aid Committee, Department of Applied Biological Sciences, MIT

1981-86 Admissions Committee, Harvard-MIT Division of Health Sciences and Technology

1983-87 Curriculum Committee, Dept. of Applied Biological Sciences (Chairman, 1985-1987)

1983-87 Radiation Committee, MIT

1983-97 Sea Grant Committee, MIT (Chairman, 1993-1997)

1985-87 Admissions Committee, Harvard MD-POD Program

1986-92 Admissions Committee, MIT Medical Engineering-Medical Physics Program

1986-1988 Harvard-MIT Joint Committee on Health Sciences and Technology Search Committee for Department Head, Department of Chemical Engineering

1988-1992 Admissions Committee, Department of Chemical Engineering

1989-1991 Undergraduate Committee, Department of Chemical Engineering

1991-1993 Seminar Chairman, Department of Chemical Engineering

1993- Board of Advisors, MIT Industrial Summer Session Program

1994-1995 Selection Committee for Co-Director of Harvard-MIT HST Program

2000- Harvard MIT Division of Health Sciences and Technology Advisory Council

2013- Karl Taylor Compton Lecture Series Committee

## EDITORIAL BOARDS

1983-2002 Biomaterials- Editor

1987- Biomaterials, Artificial Cells, and Immobilization Technology (Associate Editor, 1991-)

1983-92 Selective Cancer Therapeutics (Cancer Drug Delivery)

1983 Methods of Enzymology-Drug Delivery Systems

1984-98 Journal of Controlled Release

1985- Biomedical Polymers

1986- Advanced Drug Delivery Systems

1987- Drug Design and Delivery

1990- Marine Biotechnology

1991-94 Chemistry of Materials

1991 - Cell Transplantation

1991 - Polymers for Advanced Technologies

1991 - Drug Targeting and Delivery

1992- International Journal of Drug Targeting

1992- Journal of Bioactive and Compatible Polymers

1994-98 Cancer Biotherapy and Radiopharmaceuticals

1994- Journal of Pharmaceutical Science

1995- Tissue Engineering

1995- Encyclopedia of Controlled Drug Delivery

1996- Birkhauser: Synthetic Biodegradable Polymer Scaffolds

1996-98 Chemical and Engineering News

1997-99/2008 Proceedings of the National Academy of Sciences

1997- Annual Reviews of Biomedical Engineering

1997- Biomedical Microdevices

1998- Diabetes Technology and Therapeutics

1999- Journal of Polymer Science, Polymer Chemistry

1999- Pharmaceutical Science

1999- Regenerative Medicine

1999- Methods of Tissue Engineering

1999- Angewandte Chemie

2000- European Journal of Pharmaceutical Sciences

2002- Journal of Investigative Dermatology-Associate Editor

2004- Mechanics and Chemistry of Biosystems

2006- Journal of Biopharmaceutics and Biotechnology



2006- Bioconjugate Chemistry  
2006- Biomacromolecules  
2007- Nano Letters  
2008- Molecular Therapy  
2009- Science Translational Medicine (Scientific Advisory Board)  
2015- Regenerative Therapy  
2016- Technology and Innovation, Journal of the National Academy of Inventors  
2016- Oncogene  
2017- Journal of Design and Science