CURRICULUM VITAE RUDOLPH A. MARCUS

Personal Information

Date of Birth: July 21, 1923 Place of Birth: Montreal, Canada

Married: Laura Hearne (deceased 2003), 1949 (three sons: Alan, Kenneth, and Raymond)

Citizenship: U.S.A. (naturalized 1958)

Education

B.Sc. in Chemistry, McGill University, Montreal, Canada, 1943 Ph.D. in Chemistry, McGill University, 1946

Professional Experience

Postdoctoral Research, National Research Council of Canada, Ottawa, Canada, 1946-49 Postdoctoral Research, University of North Carolina, 1949-51

Assistant Professor, Polytechnic Institute of Brooklyn, 1951-54; Associate Professor, 1954-58; Professor, 1958-64; (Acting Head, Division of Physical Chemistry, 1961-62) Member, Courant Institute of Mathematical Sciences, New York University, 1960-61 Professor, University of Illinois, 1964-78 (Head, Division of Physical Chemistry, 1967-68)

Visiting Professor of Theoretical Chemistry, IBM, University of Oxford, England, 1975-76

Professorial Fellow, University College, University of Oxford, 1975-76

Arthur Amos Noyes Professor of Chemistry, California Institute of Technology, 1978-Professor (hon.), Fudan University, Shanghai, China, 1994-

Professor (hon.), Institute of Chemistry, Chinese Academy of Sciences, Beijing, China, 1995-

Fellow (hon.), University College, University of Oxford, 1995-

Linnett Visiting Professor of Chemistry, University of Cambridge, 1996

Honorable Visitor, National Science Council, Republic of China, 1999

Professor (hon.), China Ocean University, Qingdao, China, 2002 -

Professor (hon.), Tianjin University, Tianjin, China, 2002-

Professor (hon.) Dalian Institute of Chemical Physics, Dalian, China, 2005-

Professor (hon.) Wenzhou Medical College, Wenzhou, China, 2005

Distinguished Affiliated Professor, Technical University of Munich, 2008-

Visiting Nanyang Professor, Nanyang Technological University, Singapore, 2008-

Einstein Professor, Chinese Academy of Sciences, 2009

Honorary Doctorates

D.Sc.h.c., University of Chicago, 1983

D.Sc.h.c., Polytechnic University, 1986

Fil.dr.h.c., University of Göteborg, Sweden, 1987

D.Sc.h.c., McGill University, Montreal, Canada, 1988

D.Sc.h.c., University of New Brunswick, St. John, Canada, 1993

D.Sc.h.c. Queen's University, Kingston, Canada, 1993

D.Sc.h.c., University of Oxford, England, 1995

D.h.c., Yokohama National University, Japan, 1996

D.Sc.hc., University of North Carolina at Chapel Hill, 1996

D.Sc.h.c., University of Illinois at Urbana-Champaign, 1997

D.Sc.h.c., Technion-Israel Institute of Technology, Israel, 1998

D.Sc.h.c., Universidad Politecnica de Valencia, Spain, 1999

D.Sc.h.c., Northwestern University, 2000

D.Sc.h.c., University of Waterloo, Canada 2002

Honorary Memberships

Member, National Academy of Sciences, 1970-

Fellow, American Academy of Arts and Sciences, 1973-

Foreign Member, The Royal Society (London), 1987-

Member, International Academy of Quantum Molecular Science, 1987-

Member, American Philosophical Society, 1990-, Member of Council, 1999-2005

Honorary Fellow, Royal Society of Chemistry, 1991-

Foreign Fellow, Royal Society of Canada, 1993-

Honorary Member, International Society of Electrochemistry, 1994-

Honorary Board Member, International Society of Theoretical Chemical Physics, 1995-

Honorary Member, Korean Chemical Society, 1996-

Honorary Editor, International Journal of Quantum Chemistry, 1996-

Foreign Member, Chinese Academy of Sciences, 1998-

Honorary Board Member of The International Raoul Wallenberg Foundation, 2003-

Honorary Board Member of The Angelo Roncalli International Committee, 2003-

Honorary Member, European Academy of Sciences, 2004-

First Honorary Scientific Fellow, Literary & Historical Society, University College, Dublin, 2004.

Sesquicentennial Medal, Polytechnic University, Brooklyn, 2006

Honorary Member, The National Museum of Emerging Science and Innovation, Tokyo, 2008-

Honorary Member, Technical University of Munich, 2008

Member, Institute of Advanced Studies, Singapore, 2008-

Einstein Professor, Chinese Academy of Sciences, 2009

Other Honors and Awards

Anne Molson Prize in Chemistry, McGill, 1943

NSF Senior Postdoctoral Fellowship, 1960-61

Alfred P. Sloan Fellowship, 1960-63

Associate Member, Center for Advanced Studies, University of Illinois, 1968-69

Alexander von Humboldt Foundation Senior U.S. Scientist Award, Technical University of Munich, 1976

Irving Langmuir Award in Chemical Physics, American Chemical Society, 1978

The Electrochemical Society Lecture, The Electrochemical Society, 1979, 1996

Robinson Medal, Faraday Division, Royal Society of Chemistry, 1982

Renaud Foundation Lectureship, American Chemical Society, Michigan State University Section, 1982

Nebraska Lectureship, American Chemical Society, University of Nebraska, 1982

Chandler Medal, Columbia University, 1983

Wolf Prize in Chemistry, 1985

Willard Gibbs Medal, American Chemical Society, Chicago Section, 1988

Peter Debye Award in Physical Chemistry, American Chemical Society, 1988

Centenary Medal, Faraday Division, Royal Society of Chemistry, 1988

S. C. Lind Lectureship, American Chemical Society, East Tennessee Section, 1988 National Medal of Science, 1989

Theodore William Richards Medal, American Chemical Society, Northeastern Section, 1990

William Lloyd Evans Award, Ohio State University, 1990

Edgar Fahs Smith Award, American Chemical Society, Philadelphia Section, 1991

Remsen Award, American Chemical Society, Maryland Section, 1991

Linus Pauling Award, American Chemical Society, Oregon, Portland, and Puget Sound Sections, 1991

Nobel Prize in Chemistry, 1992

Joseph O. Hirschfelder Prize in Theoretical Chemistry, 1993

American Academy of Achievement Golden Plate Award, 1993

Honorary Citizen of Winnipeg, 1994

Lavoisier Medal, Société Française de Chimie, 1994

Treasure of Los Angeles Award, Central City Association of Los Angeles, 1995

Auburn - G. M. Kosolapoff Award, American Chemical Society, Auburn Section, 1996

Award in Theoretical Chemistry, American Chemical Society, 1997

Oesper Award, American Chemical Society, Cincinnati Section, 1997

Honorary Co-President, 29th International Chemistry Olympiad, Montreal, Canada, 1997 Top 75 Award, Chemical and Engineering News, American Chemical Society, 1998 Key to the city of Taipei, Taiwan, 1999

Wilhelm Jost Lecture and Medal, Deut. Bunsenges and Acad. Sci. Gottingen, 1999

Honorary Professorship, Ocean University of Qingdao, China, 2002

Honorary Professorship, Tianjin University, China, 2002

Symposium in honor of Professor Rudolph A. Marcus, Organized by faculty at the Technical University of Munich, Germany, 2003

Symposium in honor of Professor Rudolph A. Marcus, John Stauffer Lecture in the Sciences, USC, Los Angeles, 2003

Tree Planting Ceremony, Nobel Garden, Pohang University, Gyeongui City, South Korea, 2004

Special Symposium in honor of Rudolph A. Marcus, American Chemical Society, San Francisco, CA 2006

Lifetime Achievement Award, Theory and Applications of Computational Chemistry Conference, Shanghai, China, 2008

Other Professional Memberships

Alpha Chi Sigma American Association for the Advancement of Science American Chemical Society American Physical Society

Committees

Chairman, Division of Physical Chemistry, American Chemical Society, 1964-65 Chairman, Board of Trustees, Gordon Research Conferences, 1968-69 (Member of Board, 1966-69, Council Member at Large, 1965-68)

Director, Zeta Corporation, Alpha Chi Sigma, 1966-70

Graduate Science Facilities Consultant, National Science Foundation, 1969-70 Advisory Board, Petroleum Research Fund, American Chemical Society, 1970-72

Executive Committee, Division of Chemical Physics, American Physical Society, 1970-72

Chairman, National Research Council - National Academy of Sciences, Committee on Kinetics of Chemical Reactions, 1975-77 (Member, 1973-77)

National Research Council - National Academy of Sciences, Climatic Impact Committee, Panel on Atmospheric Chemistry, 1975-78

National Research Council - National Academy of Sciences, Committee on Chemical Sciences, 1977-79

Advisory Committee for Chemistry, National Science Foundation, 1977-80

Co-Chairman, Executive Committee, American Academy of Arts and Sciences, Western Section, 1981-84 (Member, Executive Committee, 1979-84)

National Research Council - National Academy of Sciences Committee to Survey Opportunities in the Chemical Sciences, 1982-86

Committee on Research and Planning, American Academy of Arts and Sciences, 1989-91 Member, External Advisory Board, NSF Center for Photoinduced Charge Transfer, Rochester, NY, 1990-

Chile Presidential Chairs Committee, Republic of Chile, 1994-96

Advisor of the Center for Molecular Sciences, Chinese Academy of Sciences, Beijing, China, 1995-

Advisor of the State Key Laboratory for Structural Chemistry of Unstable and Stable Species, Beijing, China, 1995-

Member, Mathematics Panel, International Benchmarking of U.S. Research Fields, NAS-NRC Committee on Science, Engineering and Public Policy, 1996-1998

Panel Member, Accountability of Federally Funded Research, COSEPUP, 2000-

Co-organizer, First Gordon Research Conference Summer School, "Analytical

Approaches to Rate Processes and Time-Resolved Spectroscopy in Condensed Phases", 2000

Editorial Boards

Journal of Chemical Physics, 1964-66

Annual Review of Physical Chemistry, 1964-69

Journal of Physical Chemistry, 1968-72 1980-84

Accounts of Chemical Research, 1968-73

International Journal of Chemical Kinetics, 1976-1980

Molecular Physics, 1977-1980

Chemical Physics Letters, 1980-1990

Laser Chemistry, 1982-

Advances in Chemical Physics, 1984-

Theoretica Chimica Acta, 1985-1988

International Advisor in Chemistry, World Scientific Publishing, 1987-

International Reviews in Physical Chemistry, 1988-

Progress in Physics, Chemistry and Mechanics (China), 1989-

Journal of the Chemical Society. Faraday Transactions, 1990-1995

Journal of the Chemical Society. Perkin Transactions 2, 1992-

Chemical Physics Research (India) 1992-

Trends in Chemical Physics (India) 1992-

International Journal of Molecular Science, Physical Chemistry, Theoretical and Computational Chemistry, 2007-

Special Lectures

Plenary Lecture, Comité International de Thermodynamique et Cinétique

Electrochemiques, USSR, 1963

Henry Werner Lectures, University of Kansas, 1963

International Summer School in Theoretical Chemistry, NATO, Constance, Germany, 1965

Frontiers in Chemistry Lecture, Western Reserve University, 1967

Venable Lecture, University of North Carolina, 1967

Seydel-Wooley Lectures, Georgia Institute of Technology, 1967

Introductory Lecture, Faraday Society Discussion on Electrode Reactions of Organic Compounds, England, 1968

Foster Lectures, State University of New York at Buffalo, 1968

Plenary Lecture, International Society of Electrochemistry, Yugoslavia, 1971

International Summer School on Applications of Quantum Mechanics to

Electrochemistry, Yugoslavia, 1971

Second International Summer School on Applications of Quantum Mechanics to

Electrochemistry, Yugoslavia, 1972

Introductory Lecture, Theoretical Section, Faraday Discussion on Molecular Beam

Scattering, University College, London, England, 1973

Lectures, Winter Institute in Theoretical Chemistry, Norway, 1976

Distinguished Lectures, University of Rochester, 1977

Summer Lectures, Northwestern University, 1977

Distinguished Visiting Professorship, University of Texas, 1977

Lectures, Seminar on Mechanisms and Kinetics of Electron Transfer, Switzerland, 1978 Kelly Lectures, Purdue University, 1978

William Draper Harkins Lecture, University of Chicago, 1980

Raymond and Beverly Sackler Distinguished Lectures in Chemistry, Tel Aviv University, Israel, 1980

I. M. Kolthoff Lectures, University of Minnesota, 1981

O. K. Rice Lectures, University of North Carolina, 1982

E. H. Boomer Lectures, University of Alberta, Canada, 1982

R. A. Robinson Memorial Lecture, Introductory Lecture, Faraday Society Discussion on Electron and Proton Transfer, The University, Southampton, England, 1982

Frontiers in Chemical Research Lectures, Texas A & M University, 1982

Charles Brockman Memorial Lecture, University of Georgia, 1982

Distinguished Lecture, 11th Peter A. Leermakers Symposium, Wesleyan University, Connecticut, 1983

Nieuwland Lecture, University of Notre Dame, 1983

Distinguished Lectures, Guelph-Waterloo Center for Graduate Work in Chemistry, Ontario, Canada, 1983

Charles Frederick Chandler Lecture, Columbia University, 1983

E. U. Condon Lecture, Department of Chemistry, University of Colorado, 1985

Sydney Golden Lecture, Brandeis University, 1985

Leland J. Haworth Distinguished Scientist Lectures, Brookhaven National Laboratory, New York, 1985-1987

Birch Lecture, Research School of Chemistry, The Australian National University, 1985 Neckers Lecture, University of Southern Illinois, 1986

Krug Lecture, Alpha Chi Sigma, University of Illinois, 1986

Plenary Lecture, Sixth Euchem Conference on Organic Electrochemistry, Switzerland, 1986

Plenary Lecture, Sixth International Conference on Photochemical Conversion and Storage of Solar Energy, France, 1986

Francis Clifford Phillips Lectures, University of Pittsburgh, 1987

Distinguished Lecture, 15th Peter A. Leermakers Symposium, Wesleyan University, 1987

Opening Lecture, Faraday Symposium on Molecular Vibrations, England, 1987

Iddles Lectures, University of New Hampshire, 1988

Dartmouth Lecture, Dartmouth College, 1988

Joe L. Franklin Memorial Lecture, Rice University, 1988

Frontiers in Chemistry Lecture, Case Western Reserve University, 1988

Arthur D. Little Lectures, Northeastern University, 1988

Convocation Address, Faculties of Science and Graduate Studies and Research, McGill University, Canada, 1988

Centenary Lectures, Royal Society of Chemistry, Universities of Cambridge,

Birmingham, Oxford, Southampton, Manchester, Strathclyde;

Imperial College of Science and Technology; England, 1988

3M University Lectures, University of Western Ontario, Canada, 1988

Plenary Lecture, Eighth International Congress on Photosynthesis, Sweden, 1989

Lectures, Summer School on Molecular Sciences, Institute of Atomic and Molecular Sciences, Academia Sinica, Taiwan, 1989

Plenary Lecture, Fortieth International Society of Electrochemistry Meeting, Japan, 1989 Theodore Williams Richards Lecture, American Chemical Society, Northeastern Section, Harvard University, 1990

John Howard Appleton Lecture, Brown University, 1990

William Lloyd Evans Award Lecture, Ohio State University, 1990

Closing Lecture, Faraday Discussion on Structure and Dynamics of Reactive Transition States, England, 1991

Glenn Brown Lectures, Case Western Reserve University, 1991

Fritz London Memorial Lecture, Duke University, North Carolina, 1991

Opening Lecture, Satellite Meeting on "Electron Transfer," International Congress of Quantum Chemistry, Sophia-Antipolis, France, 1991

George Fisher Baker Lectures in Chemistry, Cornell University, 1991

Dupont Lecture, Harvey Mudd College, 1992

Northwest Lectureship in Physical Chemistry, Molecular Science Research Center,

Battelle Pacific Northwest Laboratories, Washington State University, and University of Washington, 1992

1991 Pauling Award Address, American Chemical Society, Oregon State University, 1992

C.A. McDowell Lectures, University of British Columbia, Canada, 1992

Nobel Lecture, Stockholm, Sweden, 1992

J.O. Hirschfelder Lectures, Madison, Wisconsin, 1993

Sigma Xi Edison Lecture, Washington, D.C., 1993

Convocation Address, University of New Brunswick, Saint John, Canada, 1993

Convocation Address, Faculty of Arts and Science, Queen's University, Canada, 1993

Opening Lecture, Cursos de Verano, Universidad Complutense, Aguadulce, Spain, 1993

Nobel Laureate Lectureship, California State University, Long Beach, CA, 1993

Blacet Lecture, University of California at Los Angeles, 1994

Opening Lecture, Accademia dei Lincei Symposium, Perugia, Italy, 1994

Special Nobel Laureate Panel, National Science Teachers Association, Anaheim, CA, 1994

Arthur D. Little Lectures, Massachusetts Institute of Technology, 1994

Priestman Lectures, University of New Brunswick at Fredericton, Canada, 1994

Beatty Lecture, McGill University, Canada, 1994

Herzberg Lecture, Carleton University, Ottawa, Canada, 1994

Nelson J. Leonard Distinguished Lectures, University of Illinois at Urbana-Champaign, 1994

Festkolloquium in honor of H. Gerischer, Berlin, Germany, 1994

Speaker, International Union of Pure and Applied Chemistry, Nobel Laureate

Symposium, "Chemistry for Life," Winnipeg, Canada, 1994

Frontiers in Chemistry Lecture in honor of Ernest Yeager, Case Western Reserve

University, Cleveland, OH, 1994

Opening Lecture, Bicentennial Celebration in honor of Lavoisier, Congrès de la Société Française de Chimie, Lyon, France, 1994

Closing Lecture, Bioelectrochemistry and Bioenergetics Symposium, Seville, Spain, 1994

F. E. Bartell Memorial Lecture, University of Michigan, 1994

Keynote Lecture, Open House, University at Buffalo, SUNY, 1994

Lecture tour, Ministry of Education, Republic of China, 1994

Lectures, Chinese Academy of Sciences, Beijing and Hefei, China, 1994

Distinguished Lecture in Science, Hong Kong University of Science and Technology, Kowloon, Hong Kong, 1994

Kenneth S. Pitzer Lecture, University of California at Berkeley, 1995

Lecture, 15th Meeting of the Nobel Laureates in Chemistry, Lindau, Germany, 1995

Plenary Lecture, International Union of Pure and Applied Chemistry, 35th Congress, Istanbul, Turkey, 1995

Opening Lecture, International Society of Electrochemistry, 46th Annual Meeting, Xiamen, China, 1995

Samuel Schrage Memorial Lecture in the History of Science and Technology, University of Illinois at Chicago, Chicago, IL, 1995

Closs Lecture, University of Chicago, Chicago, IL, 1995

Lecture, Solvay Conference, Brussels, Belgium, 1995

Opening Lecture, Symposium on Electron Transfer in Proteins and Supramolecular Assemblies at Interfaces, Kanagawa, Japan, 1996

Davis Lecture, University of New Orleans, New Orleans, LA, 1996

Matsen Lecture, University of Texas at Austin, Austin, TX, 1996

Distinguished Lecture, University of Louisville, Louisville, KY, 1996

Electrochemical Society Lecture, 189th Meeting of the Electrochemical Society, Los Angeles, CA, 1996

Linnett Visiting Professor Lectures, University of Cambridge, England, 1996

Inaugural Symposium Lecture, Korea Institute for Advanced Study, Seoul, Korea, 1996

Twenty-fifth Anniversary Lecture, Korea Advanced Institute of Science and Technology, Taejon, Korea, 1996

Lecture, Nobel Symposium, Björkborn, Sweden, 1996

Lecture, Electron Centennial Meeting, University of Cambridge, UK, 1997

George B. Kistiakowsky Lecture, Harvard University, Cambridge, MA, 1997

Bryce Crawford Lecture, University of Minnesota, Minneapolis, MN, 1997

Plenary Lecture, Conference on Optical, Electronic and Magnetic Properties of

Molecules, University of Cambridge, UK, 1997

Oesper Lecture, University of Cincinnati, OH, 1997

Plenary Lecture, Symposium on Chemistry, Centennial Celebration of Peking University, Beijing, China, 1998

Lecture, Symposium, Twenty Years of Wolf Prizes, Jerusalem, Israel, 1998

Lecture, 16th Meeting of Nobel Laureates in Chemistry, Lindau, Germany, 1998

Speaker, Renaissance Weekend, Beaver Creek, CO, 1998

Lecture, Polytechnic University, ACS Global Salute to Polymers, American Chemical Society, New York, 1999

Lecture, Centennial Meeting, Centennial Symposium on "The History of Chemical Physics", American Physical Society, Atlanta, GA, 1999

Lecture, 9th Tohwa University International Symposium on Chemistry into the 21st Century, Japan, 1999

Hon. D.Sc. Lecture, Polytechnic University of Valencia, Spain, 1999

Lecture, Conference on Isotopes and Isotope Effects, Carry le Rouet, France, 1999

Lecture, Humboldt 200th Anniversary Lecture Series, Berlin, Germany, 1999

Wilhelm Jost Memorial Lectures and Silver Medal, Deutsche Bunsengesellschaft and

Academy of Sciences in Gottingen, at Leipzig, Halle, Dresden, Gottingen and Marburg, Germany, 1999

Festsitzung Lecture in honor of Prof. J. Wolfrum, Heidelberg, Germany, 1999

Nobel Lecture, Ritsumeikan University, Kusatsu, Japan, 1999

Nobel Lecture, Kanagawa University, Yokohama, Japan, 1999

Plenary Lecture, 8th Asian Chemical Congress, Taipei, Taiwan, 1999

Plenary Lecture, 3rd NIMC International Symposium on Photoreaction Control and

Photofunctional Materials, Tsukuba, Japan, 2000

Lecture, Nobel Laureates' Jubilee Meeting, Lindau, Germany, 2000

Lecture, Canadian Nobel Laureates Symposium, Alberta Teachers' Association Science Council Conference 2000, Edmonton, Canada, 2000

Lecture, Chemical Heritage Foundation, Nobel Centennial Symposium, Philadelphia, PA, 2000

Lecture, Nobel Laureates, Chemical Dynamics at the Turn of the New Century: Nobel Laureates Look Back and Ahead, American Chemical Society, San Diego, CA, 2001

First Richard M. Noyes Memorial Lecture, University of Oregon, 2001 Plenary Lecture, International Conference on Electrified Interfaces, Acadia University,

Plenary Lecture, International Conference on Electrified Interfaces, Acadia University, Wolfville, NS, Canada, 2001

Plenary Lecture, First International Symposium on Isotopomers, Yokohama, Japan, 2001 Lecture, 14th Canadian Symposium on Theoretical Chemistry, Ottawa, Canada, 2001

Lecture, International Symposium on Interfacial Electron Transfer, American Chemical Society, Chicago, IL, 2001

Lecture, Sutin Symposium, Brookhaven National Laboratory, Upton, NY, 2001

Lecture, Medical Research Council, Cambridge, England, 2001

Lecture, Nobel Jubilee Symposium, Frontiers of Molecular Sciences, Friiberghs Manor, Örsundsbro, Sweden, 2001

Lecture, DOE Chemical Sciences Council Workshop on Charge Transfer on the Nanoscale, Santa Fe, NM, 2002

Lecture, Gordon Research Conference on Isotope Effects in the Biological and Chemical Sciences, Ventura, CA 2002

Keynote Lecture, Bioelectrochemistry Symposium. The Electrochemical Society Centennial Meeting, Philadelphia, PA, 2002

Lecture, Manuel M. Baizer Award Symposium on Organic Electrochemistry Symposium.

The Electrochemical Society Centennial Meeting, Philadelphia, PA, 2002

Plenary Lecture, International Symposium on Frontiers in Molecular Science, China Ocean University, Qingdao, China, 2002

Lecture, Tianjin University, Tianjin, China, 2002

Lecture, Tsinghua University, Tsinghua, China, 2002

Keynote Speaker, International Goldschmidt Conference, Davos, Switzerland, 2002

Lecture, Noyes Laboratory Centennial Celebration, University of Illinois, Urbana-Champaign, IL 2002

Lecture, University of Waterloo Ontario, Canada, 2002

Keynote Speaker, 12th Annual Goldschmidt conference, Davos, Switzerland, 2002

Lecture, American Geophysical Union, "Mass Independent Isotope Fractionation: New Frontiers in Isotope Biogeochemistry", San Francisco, 2002

Lecture, Hydrogen Storage Think Tank Meeting, Department of Energy, Washington DC, 2002

Lecture, 31st John Stauffer Lecture in the Sciences Symposium, "Frontiers in Theoretical Chemistry", Los Angeles, CA, 2003

Robinson Memorial Lecture, Texas Tech University, 2003

Lecture, Jortner-Fest Symposium, Tel Aviv, Israel, 2003

Lecture, Meeting of Nobel Laureates, Lindau, Germany, 2003

Plenary Lecture, Symposium on Slow Dynamics in Complex Systems, Sendai, Japan, 2003.

Plenary Lecture, U.S.-Korea Conference on Science, Technology & Entrepreneurship, California Institute of Technology, Pasadena, California (2003).

Nobel Lecture, University of La Verne, La Verne, California (2003).

Keynote Lecture "Computational and Analytic Theoretical Approaches to the Problems in Science", Symposium of International Center for Technology and Innovation, University of Calabria Cosenza, Italy, 2003

Plenary Lecture, "Unusual Isotope Effects in the Upper and Lower Atmosphere. Frontiers of Chemical Sciences, Research and Education in the Middle East, American Chemical Society & International Union of Pure & Applied Chemistry, Portomaso, Malta, 2003.

Lecture, Nobel Symposium, "From Erector Sets to the Nobel: A Life in Science",

University of Laverne, Los Angeles, California, 2003.

Lecture, International Centre for Theoretical Physics, Trieste, Italy 2004.

Lecture, Fantoni Research Center, Udine, Italy (2004).

Lecture and Discussion, Garibaldi High School, Udine, Italy (2004).

Lecture, Fantoni Research Center, Udine, Italy (2004).

Lecture, Department of Chemistry and Astronomy, University of Padova, Padova, Italy 2004.

Plenary Lecture, Symposium on Theory and Applications of Computational Chemistry, Gyeongui City, South Korea 2004.

Commencement Address, Pohang University, Pohang, South Korea, 2004.

Lecture, Alhambra High School Science Fair, Alhambra, California, March, 2004.

Lecture, Imperial College, University of London, U.K. 2004.

Lecture, Mark S. Child Symposium, Theoretical Chemistry Laboratory, Oxford University, Oxford, U.K. 2004.

Lecture to Students, Department of Chemistry, Columbia University, New York, NY (2004).

Lecture, Institute of Geophysics and Planetary Sciences, University of California Los Angeles, 2004.

Slichter Lecture, Institute of Geophysics and Planetary Sciences, University of California Los Angeles, 2004.

Bridicka Lecture, Heyrovsky Institute, Czech Academy of Science, Czech Republic, 2004.

Lecture, 40th Anniversary Celebrations, Abdus Salam International Centre for Theoretical Physics, 2004.

Lecture, 40th Anniversary Celebrations, Abdus Salam International Centre for Theoretical Physics, Trieste, Italy 2004.

Plenary Lecture, VII School of Neutron Scattering, Palau, Sardinia, Italy 2004.

Opening Plenary Lecture, 3rd Annual Conference of Chinese Theoretical and Computational Chemistry, Hong Kong, January 2005.

Opening Plenary Lecture, Asian Photochemistry Conference, Taipei, Taiwan, January, 2005.

Lecture, GeoClub, California Insitute of Technology, Pasadena, Ca., February, 2005.

Lecture, Westridge High School, Pasadena, California, 2005.

Lecture, Department of Chemistry, University of California Berkeley, 2005.

Flygare Memorial Lecture, University of Illinois-Champaign Urbana, Urbana, Illinois 2005.

Roundtable Discussion, Nobel Laureates' Meeting, Lindau, Germany, 2005.

Keynote Lecture, Femtochemistry VII Conference, Washington, D.C., 2005.

Plenary Lecture, Edinburgh Protein Interaction Centre (EPIC), Edinburgh, Scotland, 2005.

Lecture, Oxygen in the Earliest Solar System Workshop, Gaitlinburg, Tennessee (2005).

Keynote Address, 3rd Annual Congress of International Drug Discovery Science and Technology, Shanghai, China, 2005.

Lecture, Wenzhou Medical College, Wenzhou, China.

Nobel Lecture, 3rd Annual Congress of International Drug Discovery Science and Technology, Dalian, China, 2005.

Lecture, Dalian Institute of Chemical Physics, Dalian, China, 2005.

Lecture, ISIS Center for Chemical Research, University Louis Pasteur, Strasbourg, France, 2005.

Lecture, In Honor of Seymour Rabinovitch, University of Washington, Seattle, Washington, 2005.

Summarizing Lecture, The Royal Society of London, London, U.K., 2005.

Distinguished Morawetz Lecture, Polytechnic University, Brooklyn, 2006.

Lecture, Nobel Laureates Meeting, Lindau, Germany, 2006.

Lecture, Technical University, Munich, Germany, 2006.

Video-Conference Lecture, National Institute of Technology, Trichy, India, 2007 Lecture, Nobel Laureates Beijing Forum 2007, Chinese Academy of Sciences, Beijing, China, 2007

Address to School Assembly & Science Club, Flintridge Prep High School, La Canada Flintridge, 2008

Plenary Lecture, 1st International Conference of the Grand Challenge to Next-Generation Integrated Nanoscience, Institute for Solid State Physics, Tokyo, Japan, 2008

Plenary Lecture, 4th International Symposium on Isotopomers, Tokyo, Japan, 2008

Plenary Lecture, Institute of Atomic and Molecular Sciences, Taipei, Taiwan, 2008

Plenary Lecture, Argonne National Laboratory, Argonne, Illinois, 2008

Lecture, Centennial Symposium, American Chemical Society 236th National Meeting, Philadelphia, 2008

Lecture, 59th Meeting of Nobel Laureates, Lindau, Germany, 2009

Einstein Lecture, Graduate School of Chinese Academy of Sciences, Beijing, China, 2009

Plenary Lecture, 12th International Conference On Electroanalytical Chemistry, Changchun, China, 2009