

Hai-Lung Dai - Curriculum Vitae

Office

Dean and Laura H. Carnell Professor, College of Science and Technology, Temple University
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Education

B.S. National Taiwan University, 1974.
Ph.D. University of California, Berkeley, 1981. Thesis: "Multiphoton Dissociation and Thermal Unimolecular Reactions Induced by Infrared Lasers"; Advisor: Professor C. Bradley Moore.

Experience

Military Service, Second Lieutenant (ROTC), Materials Sciences Laboratory, Combined Services Force, Taiwan, ROC, 1975-1976.
Postdoctoral Fellow, Massachusetts Institute of Technology, with Professors Robert W. Field and James L. Kinsey, 1981-1984.
Assistant Professor, University of Pennsylvania, 1984-1989.
Associate Professor, University of Pennsylvania, 1989-1992.
Guest Professor, National Taiwan University, 1991-1992.
Adjunct Professor, National Tsing-Hua University, 1991-1992.
Professor, University of Pennsylvania, 1992 - .
Chairman, Department of Chemistry, University of Pennsylvania, 1996-2002.
Member of the Pennsylvania State Board of Drugs, Devices and Cosmetics, 2002-.
Hirschmann - Makineni Professor of Chemistry, University of Pennsylvania, 2002-2006.
Director, Penn Science Teacher Institute, 2004-2006.
Dean and Laura H. Carnell Professor, College of Science and Technology, Temple University, 2007-

Scholastic Honors

Camille and Henry Dreyfus Foundation Distinguished New Faculty Award, 1985.
Young Faculty Award, Natural Sciences Association, University of Pennsylvania, 1987.
Alfred P. Sloan Foundation Fellow, 1988-1990.
Camille and Henry Dreyfus Foundation Teacher-Scholar Award, 1989.
The 1990 Coblenz Award in Molecular Spectroscopy, Coblenz Society of Spectroscopy.
Morino Lectureship, The Morino Foundation and the University of Tokyo, Japan, 1992.
Fellow, American Physical Society, elected 1992.
Guest Professor, University of Science and Technology of China, 1994-.
Alexander von Humboldt Research Award for Senior U.S. Scientists, 1994-.
American Chemical Society, Philadelphia Section Award, 1995.
John Simon Guggenheim Fellow, 2000.
Molecular Science Lectureship, Institute of Chemistry, Chinese Academy of Science, 2001
Vice Chair (2004), Chair-Elect (2005) and Chair (2006), Division of Chemical Physics, American Physical Society
Ellis Lippincott Award, Optical Society of America, Society of Applied Spectroscopy, and Coblenz Society, 2006

Research Interests

Physical Chemistry, Chemical Physics, Surface Science, Nonlinear Optics, Materials Science, and Science Education: Laser and Spectroscopic Probe of Transient and Highly Excited Molecules. Energetic and Structural Factors Influencing Chemical Reactivity. Intra- and Inter-Molecular Energy Transfer. Photon and Electron Induced Reactions on Surfaces. Structure and Reactivity in Thin Molecular Films.

Molecule-Surface Interactions in Colloidal and Biological Systems. Pre-College Science Education and High School Chemistry Teacher Preparation.

Published ~150 articles and edited two books and five journal volumes as of 2006. Delivered more than 240 invited lectures/seminars in international/national meetings, research institutions and universities since 1984.

Professional Activity (University of Pennsylvania)

University Judicial Committee, 1989-91.

University Graduate Council, 1993-95.

School of Arts and Science Planning and Priority Committee, 1994-97.

Search Committee for the Director of the Materials Research Laboratory (LRSM), 1994.

Executive Committee of Laboratory for Research on the Structure of Matter, 1994-96.

Physics Department Senior Faculty Search Committee, 1995.

Chairman, Department of Chemistry, 1996-2002.

School of Arts and Science Review Panel of the Physics Department, 1999.

Faculty Advisor to the Master of Chemistry Education Program, 1999-2004 and Director, Penn Science Teacher Institute, 2004-.

Provost Committee on Facility Planning, 2000.

School of Arts and Science Committee on Academic Freedom, 2002-06.

Chair, Search Committee for the Director of the Materials Research Laboratory (LRSM), 2003.

Materials Science Research Facility Planning Committee, 2003.

Science Education Faculty Search Committee, Graduate School of Education, 2004

Committee on Continuing Graduate Education, School of Arts and Science, 2004-06

Hearing Boards for the Student Disciplinary System and the Code of Academic Integrity, 2005-06

Other Professional Activities

Present

Committee on Science and the Arts, the Franklin Inst. of Philadelphia, 1991- .

Consultant, DuPont Marshall Laboratory, 1997-.

Board member, Monte Jade Science and Technology Association of Mid-Atlantic States, 2000-.

Member, Pennsylvania State Board of Drug, Device, and Cosmetic, 2002-2006. (Nominated by Governor Schweiker and confirmed by the Pennsylvania State Senate on Feb. 6, 2002.)

Fellow, Institute for Corean-American Studies, 2004-.

Advisory Board, Institute of Atomic and Molecular Sciences, Academia Sinica (Taipei), 2002-2006.

Advisory Board, Nat. Key Laboratory on Molecular Dynamics, Chinese Academy of Science, 2003-.

Department of Chemistry Advisory Board, Drexel University, 2004-.

Associate Editor, Advanced Series in Physical Chemistry (World Scientific), 1992-.

Advisor in Chemistry to World Scientific Publishing Co., 1997-.

Editorial board, Chinese Journal of Physical Chemistry (Beijing), 2001-

Editorial board, Chinese Journal of Chemical Physics (Hefei), 2002-

Advisory Board, Journal of Physical Chemistry, American Chemical Society, 2004-

Chair (2006-07), Division of Chemical Physics, American Physical Society

Past

Office of Naval Technology Postdoctoral Fellowship Review Panel, 1987.

President, Philadelphia Chapter of Nat. Taiwan University Alumni Association, 1989.

Co-chairman, Symposium on "Photochemistry in Thin Films", The International Society for Optical Engineering, Los Angeles, January 1989.

U.S. Observer at the 35th IUPAC General Assembly and the Commission on Molecular Structure and Spectroscopy, Sweden, August 1989.

Site Review Panel on the U.S. Department of Energy Combustion Dynamic Facility Proposal, Lawrence Berkeley National Laboratory, October 1989.

Guest Editor of *J. Optical Society of America*, special issue on "Molecular Spectroscopy and Dynamics by Stimulated Emission Pumping", September 1990.

Co-chairman, Division of Chemical Physics Symposium, American Physical Society Spring Meeting, Washington, D.C., 1991.

Executive Council, Overseas Chinese Physical Association, 1990 -1992.

Chairman, Coblentz Award Selection Committee, Coblentz Society for the Advancement of Spectroscopy, 1992.

Co-chairman, Symposium on "Laser Techniques for State-Selected and State-to-State Chemistry," Int. Society for Optical Engineering, Los Angeles, January, 1993.

Chairman, Symposium on "Laser Techniques for Surface Science", International Society for Optical Engineering, Los Angeles, January, 1994.

Co-editor, with Robert W. Field, of *Molecular Spectroscopy and Dynamics by Stimulated Emission Pumping*, Vol. 4 of Adv. Ser. Phys. Chem. (World Scientific, 1995).

Co-editor, with Wilson Ho, of *Laser Spectroscopy and Photochemistry on Metal Surfaces* Vol. 5 of Adv. Ser. Phys. Chem. (World Scientific, 1995).

Review Panel on the Chemical Physics Program of the Brookhaven National Laboratory, October, 1994.

Co-Chairman, Symposium on "Complexity at Interfaces", Am. Physical Society, San Jose, March, 1995.

Chairman, Symposium on "Laser Techniques for Surface Science II", International Society for Optical Engineering, San Diego, July, 1995.

Chairman, Symposium on "Laser-Surface Interactions", 1995 Opt. Soc. of Am. Ann. Meeting and Int. Laser Science XI Meeting, Portland, Oregon, September, 1995.

NSF Optics Topics Proposal Review Panel, March, 1996.

Bower Award and Franklin Medal Award Committee, the Franklin Institute, 1994-1996.

Co-Chairman, Symposium on "Time Resolved Fourier Transform Spectroscopy", Opt. Soc. of Am. Ann. Meeting and Int. Laser Science X Meeting, Rochester, Oct. 1996.

Faculty Opponent, Chalmers University, Department of Physics, Gorteborg, Sweden, October, 1996.

Am. Physical Society Fellow Selection Committee (Chem. Phys. Div.) 1996-98, chairman, 1998.

Advisory Committee, Gordon Conference on Molecular Electronic Spectroscopy, 1997.

Local Organizing Committee, 58th Physical Electronics Conference, Penn State Univ., June 1998

Co-chairman, Symposium on "Laser Techniques for Surface Science III", International Society for Optical Engineering, San Jose, Jan. 1998.

Local Organizing Committee, 58th Physical Electronics Conference, Penn State Univ., June 1998

Am. Chem. Soc. Phila. Sect. Award Committee, 1996-98.

NSF Materials Science Division Major Research Instrumentation Review Panel, May, 1999

Program committee, 8th International Workshop on Desorption Induced by Electronic Transitions (DIET8), Sept. 1999, Rutgers U.

Ministry of Education (Taiwan) University Research Excellence Projects Review Referee, 1999.

Review Panel, US Department of Energy Basic Energy Science Review of the Pacific Northwest National Laboratory, Feb. 2000.

Program advisory committee, Gordon Conference on Electronic Spectroscopy and Dynamics, 2000.

NSF Chemistry Research Instrumentation and Facilities Review Panel, Aug. 2000.

NSF Review Panel of ChemCars National Facility at Argonne National Laboratory, Oct. 2000

Chairman, Symposium on Photon and Electron Induced Surface Processes, the 2000 International Chemical Congress of Pacific Basin Societies.

Steering Committee of the Penn/Princeton/Rutgers Materials Summer School, 1995-2000.

NSF Review Panel on Collaborative Research in Chemistry, May 2001

Director Search Committee, Inst. of Atomic and Molecular Sciences, Academia Sinica (Taipei), 2001.

NSF Site Review Panel on Laboratory of Molecular Sciences at Cal Tech, Oct. 2001

Academic Advisory Committee, Inst. of Advanced Studies, Tsing-Hua U. Beijing, 1997-2002.

Review Panel, Institute of Chemical Physics, Chinese Academy of Sciences, Dalian, China, 6/2002.

Co-Chair, Symposium on “Structure and Properties of Organic Thin Films”, March Meeting of the American Physical Society, 2003.

External Review Panel, College of Science, National Sun Yat-Sen University, Taiwan, April, 2003.

Co-Chair, Symposium on Physical Chemistry of Interfaces and Nanotechnology, Soc. Int. Opt. Eng. Annual Meeting, San Diego, Aug. 2003

Chair, Symposium on Quantum Optics, CLEO/Pacific Rim, Taipei, 2003.

Franklin Institute Bower Award Selection Committee, 2004.

American Physical Society Information Technology Task Force, 2004.

National Academies Committee on Prospering in the Global Economy of the 21st Century, K-12 Education Focus Group member, Aug. 2005

Program Chair, Div. Chem. Phys., American Physical Society March Meeting, 2006

Visiting Chair Professor, National Sun Yat-Sen University, Taiwan, June 2006.

Chair, Chemical Physics Symposium, Frontier of Physics Conference, Taipei, June 2006.

Review panel of top universities in Taiwan, Ministry of Education, Taiwan, Jan. 22-30, 2007.