Prof. Yuan-Tseh Lee
Professor, Nobel laureate in Chemistry, 1986

Most important awards, prizes and academies

Fellowships: Alfred P. Sloan Fellow, 1969-71; Camille and Henry Dreyfus Foundation Teacher Scholar Grant, Recipient 1971-4; Fellow, American Academy of Arts and Science, 1975; Fellow, American Physical Society, 1976; John Simon Guggenheim Fellow, 1976-7. Academies: Member, U.S. National Academy of Sciences, 1979; Member, Academia Sinica, Taiwan, China, 1980; Corresponding Member, Göttingen Academy of Sciences, Germany, 1988; Honorary Foreign Member, Indian National Science Academy, 1997; Honorary Member, The Japan Academy, 2007; Honorary Member, The Hungarian Academy of Sciences, 2007; Member of the Pontifical Academy of Sciences, 2007. *Honours*: Honorary Professor, Institute of Chemistry, Chinese Academy of Science, Beijing, China, 1980; Honorary Professor, Fudan University, Shanghai, China, 1980; Miller Professorship, University of California, Berkeley, California, 1981-1982; Honorary Professor, Chinese University of Science and Technology, Hofei, Anhuei, China, 1986; Honorary Doctor of Science Degree, University of Waterloo, 1986. *Awards*: Ernest O. Lawrence Award, U.S. Department of Energy, 1981; Sherman Fairchild Distinguished Scholar, California Institute of Technology, 1983; Harrison Howe Award, Rochester Section, American Chemical Society, 1983; Peter Debye Award of Physical Chemistry, American Chemical Society, 1986; National Medal of Science, White House, USA, 1986; Nobel Prize in Chemistry, 1986; Faraday Medal, Royal Society of Chemistry, UK, 1992; Jawaharlal Nehru Biorth Centenary Medal, Indian

National Science Academy, 2004.

Summary of scientific research

Prof. Lee determined the structure and chemical behaviour of highly reactive polyatomic radicals and unusual transient species. He provided microscopic details of mechanisms and dynamics for elementary chemical reactions and primary photodissociation processes. He probed the nature of infra- and intermolecular energy relaxation. He searched for bond-selective, region-selective or mode-selective means to modify and manipulate chemical reactivity. He developed methods for detecting and studying directly the transient intermediates that are critical in combustion and atmospheric processes.

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ain publications

The following are Prof. Lee's ten most representative publications: P.A. Schultz, Aa.S. Sudbo, E.R. Grant, Y.R. Shen, and Y.T. Lee, Multiphoton Dissociation of SF6 by a Molecular Beam Method, *J. Chem. Phys.*, 72, 4985-95 (1980). LBL-9202; Carl C. Hayden, Daniel M. Neumark, Kosuke Shobatake, Randal K. Sparks, and Yuan T. Lee, Methylene Singlet-Triplet Energy Splitting by Molecular Beam Photodissociation of Ketene, *J. Chem. Phys.*, 76, 3607-13 (1982); D. Krajnovich, F. Huisken, Z. Zhang, Y.R. Shen, and Y.T. Lee, Competition Between Atomic and Molecular Chlorine Elimination in the Infrared Multiphoton Dissociation of CF2Cl2, *J. Chem. Phys.*, 77, 5977-89 (1982). LBL-14478; L.J. Butler, E.J. Hintsa, and Y.T. Lee, Bond Selective Photochemistry in CH2BrI Through Electronic Excitation at 210 nm, *J. Chem. Phys.*, 84, 4104-6 (1986). LBL-20770; Xinsheng Zhao, Eric J. Hintsa, and Yuan T. Lee, Infrared Multiphoton Dissociation of RDX in a Molecular Beam, *J. Chem. Phys.*, 88, 801-10 (1988); R.H. Page, Y.R. Shen, and Y.T. Lee, Infrared-Ultraviolet Double Resonance Studies of Benzene Molecules in a Supersonic Beam, *J. Chem. Phys.*, 88, 5362-76 (1988). LBL-23769; Xinsheng Zhao, Robert E. Continetti, Atsushi Yokoyama, Eric J. Hintsa, and Yuan T. Lee, Dissociation of Cyclohexene and 1,4-Cyclohexadiene in a Molecular Beam, *J. Chem. Phys.*, 91, 4118-27 (1989). LBL-26333; Floyd Davis and Yuan T. Lee, Dynamics and Mode Specificity in OCIO Photodissociation, *J. Phys. Chem.*, 96, 5681-4 (1992). LBL-32189; J.J. Lin, D.W. Huang, Y.T. Lee, and X. Yang, Specific site and isotope effects on the concerted molecular hydrogen elimination from ethylene, *J. Chem. Phys.*, 109 (8), 2979-82 (JCP communication) (1998); S. Harich, J.J. Lin, Y.T. Lee, and X. Yang, Site Specific Dissociation Dynamics of Propyne at 157 nm, *J. Chem. Phys.*, 112, 15, 6656-65 (2000).