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WORK ADDRESS:

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BIRTH: January 25, 1952 (in Hsinchu, Taiwan)

CITIZENSHIP: Taiwan

FAMILY: Married, with one daughter and one son

EDUCATION:

- B.S. (Chemistry), National Taiwan University, Taipei, Taiwan
1969/8–1973/6
- Ph.D. (Chemistry), University of California, Berkeley, CA, U. S. A.
1975/9–1979/9

EMPLOYMENT:

- Research Associate, Aeronomy Laboratory, National Oceanic and Atmospheric Administration-Environmental Research Laboratories, Boulder, Colorado, USA
(1979/9–1981/8)
- Associate Professor, Department of Chemistry, National Tsing Hua University
(1981/8– 1985/7)
- Professor, Department of Chemistry, National Tsing Hua University
(1985/8–2004/7)
- Adjunct Research Fellow, Institute of Atomic & Molecular Sciences, Academia Sinica
(1988/4–2022/1)
- Chair Professor, Dept. Applied Chemistry & Inst. Molecular Science, National Chiao Tung University (National Yang Ming Chiao Tung University from 2021/2)
(2004/8–present); retired 2022/1

- Contract-based Professor, Dept. Applied Chemistry & Inst. Molecular Science, National Yang Ming Chiao Tung University (2022/1–present)

ADMINISTRATIVE or VISITING POSITION:

- Director, NSC Regional Instrument Center at NTHU (1991–2003)
- Director, Institute of Molecular Science, National Chiao Tung University (2004/8–2007/7)
- Dean, College of Science, National Chiao Tung University (2005/8–2008/7)
- Director, Center for Interdisciplinary Science (CIS), National Chiao Tung University (2007–2017)
- Director, Center of Emergent Functional Material Science (CEFMS), National (Yang Ming) Chiao Tung University (2018)
- Endowed Chair on Advanced Energy Engineering (Mitsubishi Heavy Industries Ltd.), University of Tokyo, Japan (1997/1–1997/3)
- Visiting Scholar, University of California, Berkeley, CA, USA, (2002/9–2002/11)
- Visiting Scholar, Stanford University, Stanford, CA, USA, (2009/2–2009/5)
- JSPS Research Fellow, Japanese Society for the Promotion of Science (2009/7–2009/9)
- Professor, International Faculty Solvation Science (IF) of RESOLV, Ruhr-Universität Bochum (2016/5–)
- Visiting Professor, Research Institute of Electronic Sciences, Hokkaido University, Japan (2021/11–2025/3)

MEMBERSHIP IN TECHNICAL SOCIETIES:

American Physical Society, fellow

Chinese Chemical Society in Taiwan

Asian Photochemistry Association

HONOR and AWARDS:

- ☺ Presidential Science Prize, 2019
- ☺ Masuhara Lectureship Award of the Asian and Oceanian Photochemistry Association, 2018
- ☺ George C. Pimentel Prize for Advances in Matrix Isolation, 2018
- ☺ Humboldt Research Award, Humboldt Foundation, Germany, 2017
- ☺ Honda-Fujishima Lectureship Award of Japanese Photochemistry Association, 2016

- ☺ 18th Chao-Ting Chang Lectures of Chao-Ting Chang Memorial Foundation, 2016
- ☺ Fellow of The World Academy of Sciences (TWAS), 2011
- ☺ 16th Excellent Academic Achievement Award, (The Phi Tau Phi Scholastic Honor Society of the Republic of China), 2011
- ☺ APA Award, (Asian and Oceanian Photochemistry Association), 2010
- ☺ Academician (Academia Sinica), 2008
- ☺ National Chair Professor (Ministry of Education, Taiwan), 1997–2000, 2000–2003, Lifetime after 2003
- ☺ Outstanding Teaching Award (National Tsing Hua University), 1986, 2000
- ☺ Fellow (American Physical Society), 1999
Citation: "For developing and applying novel spectroscopic techniques for characterizing radical species, particular their kinetics and unstable structure"
- ☺ Academic Achievement Medal (The Chinese Chemical Society), 1996
- ☺ Outstanding Scholarship (Foundation for the Advancement of Outstanding Scholarship, Taiwan), 1995–2000, 2003—2008, 2008–2013
- ☺ Award for Outstanding Principal Investigators (National Science Council, Taiwan), 1995–1998, 1998–2001
- ☺ Outstanding Research Award (National Science Council, Taiwan), 1989–1991, 1991–1993, 1993–1995
- ☺ 16th Wu Shan-Liang Award, 1993
- ☺ Academic Achievement Award in Science (Ministry of Education, Taiwan), 1990
- ☺ Chung-Shan Academic Research Award, 1988

INVITED LECTURES IN INTERNATIONAL CONFERENCES:

Over 175 invited talks in international conferences and foreign institutes

RESEARCH INTEREST:

1. Spectral studies of free radicals and unstable species important in atmospheric, combustion, and planetary chemistry
 - ⇒ Production and IR characterization of novel species, free radicals, protonated species produced in low temperature matrices, especially in *para*-hydrogen quantum solid
 - ⇒ IR absorption spectroscopy of unstable species using time-resolved step-scan Fourier-transform absorption spectroscopy or quantum-cascade IR laser absorption
 - ⇒ Mass-selective IR spectroscopy using VUV/IR photoionization TOF detection.

- ⇒ Laser-induced fluorescence of species in a supersonic jet or in *para*-hydrogen matrix
 - ⇒ NIR cavity ringdown spectroscopy of free radicals
 - ⇒ Degenerate four-wave mixing and two-color resonant four-wave mixing spectroscopy: application to predissociative species and species in high overtones
 - ⇒ VUV photoabsorption and photoionization using synchrotron radiation
2. Kinetic and dynamic studies on reactions of free radicals important in atmospheric and combustion chemistry
- ⇒ Dynamic studies of photolytic processes or bimolecular reactions using time-resolved step-scan Fourier-transform emission spectroscopy or quantum-cascade IR laser absorption
 - ⇒ Kinetic and mechanism investigations using discharge flow/LIF or resonance fluorescence, step-scan FTIR absorption, or quantum-cascade IR laser absorption
 - ⇒ Kinetic studies at high temperatures using a diaphragmless shock tube
3. Ultrafast spectroscopy and dynamics
- ⇒ Transient UV and IR absorption for solutions and solids