

Presentation Title: My experience in Japan-Taiwan collaborations

Name: Yuan-Pern Lee

Current Position: Chair Professor

Affiliation: Dept. Applied Chemistry, NYCU

Degree: Ph.D. (Chemistry) at U. C. Berkeley, USA

Non-scientific Interests: Tennis, classical music

Area of scientific Interest:

Spectroscopy, kinetics, and dynamics of free radicals or unstable species that are important in astrochemistry, atmospheric chemistry, or combustion chemistry. The techniques employed include step-scan FTIR (both emission and absorption), matrix isolation with p -H₂, quantum-cascade laser absorption, IR-VUV photoionization/time-of-flight detection, shock tube, four-wave mixing, NIR cavity ringdown, and laser-induced fluorescence.

Brief Biography:

- **Work experience**

2022 – Present Contract-based Professor, National Yang Ming Chiao Tung University

2004 – 2022 Professor, Dept. Applied Chemistry, National (Yang Ming) Chiao Tung University, Taiwan

1985 – 2004 Professor, Dept. Chemistry, National Tsing Hua University, Taiwan

1981 – 1985 Associate Professor, Dept. Chemistry, National Tsing Hua University, Taiwan

- **Education**

1979 – 1981 Aeronomy Laboratory, National Oceanic and Atmospheric Administration-Environmental Research Laboratories, Boulder, Colorado, USA (Postdoctor)

1975 – 1979 Department of Chemistry, Univ. California, Berkeley, USA (PhD)

1969 – 1973 Department of Chemistry, National Taiwan University, Taiwan (BS)

- **Major Awards and Honors**

2019 Presidential Science Prize, Taiwan

2018 Masuhara Lectureship Award of the Asian and Oceanian Photochemistry Association

2018 George C. Pimentel Prize for Advances in Matrix Isolation

2017 Humboldt Research Award, Humboldt Foundation, Germany

2016 Honda-Fujishima Lectureship Award of Japanese Photochemistry Association

2011 Fellow of The World Academy of Sciences (TWAS)

2010 Asian and Oceanian Photochemistry Association Award

2008 Academician, Academia Sinica (Taiwan)

1997 – 2003 (life term afterwards) National Chair Professor, Ministry of Education, Taiwan

1999 Fellow, American Physical Society



Presentation Title: Japan-Taiwan Collaboration and Exchange on Bioelectronic Technologies

Name: Chung-Yu Wu

Current Position: Honorary Life Chair Professor/Chairman & CTO

Affiliation: National Yang Ming Chiao Tung University (NYCU)/A-Neuron Corp., Taiwan

Degree: Ph.D. of National Chiao Tung University, Taiwan

Non-scientific Interests: Poem Writing, History Study

Area of scientific Interesting:

My research interests are implantable biomedical integrated circuits and systems, intelligent bio-inspired sensor systems, RF/microwave communication integrated circuits, neural network, analog/mixed-signal integrated circuits, and nanoelectronics.



Brief Biography:

- **Work experience**

2020 - Present Chairman/CTO, A-Neuron Electronic Corp., Taiwan
Honorary Life Chair Professor, NYCU, Taiwan

2011 - 2018 Director/Chair Prof., Biomedical Electronics Translational Research Center (BETRC), NYCU

2007 - 2011 President, National Chiao Tung University (NCTU), Taiwan

2002 - 2005 Dean of EE (EECS) College, NCTU, Taiwan

1991 - 1995 Director, Division of Engineering, National Science Council, Taiwan

- **Education**

1976 - 1980 Ph.D., Electronics Engineering, National Chiao Tung University, Taiwan

1974 - 1976 M.S., Electronics Engineering, National Chiao Tung University, Taiwan

1968 - 1972 B.S., Electro-physics, National Chiao Tung University, Taiwan

Presentation Title: Strong Collaboration with NYCU in Research and Education of Biomedical Engineering

Name: Jun OHTA

Current Position: Executive Director & Vice President, Professor

Affiliation: NAIST

Degree: Dr. Eng. at The University of Tokyo, Japan

Area of scientific Interesting:

Implantable biomedical devices based on semiconductor technology; retinal prosthetic devices, brain-implantable micro imaging devices, optoelectronic devices for optogenetics.



Brief Biography:

- **Work experience**

2021 - Present Executive Director and Vice President, NAIST

2018 - Present Professor, Division of Materials Science, NAIST

2004 - 2018 Professor, Graduate School of Materials Science, NAIST

1998 - 2004 Associate Professor, Graduate School of Materials Science, NAIST

1991 - 1992 Visiting Associate, University of Colorado, Boulder, USA

1983 - 1998 Mitsubishi Electric Corporation, Japan

- **Education**

1981 - 1982 Graduate School of Engineering, The University of Tokyo

1977 - 1981 Department of Applied Physics, Faculty of Engineering, The University of Tokyo

Presentation Title: Research and Student Exchange between Japanese Universities and NYCU

Name: Teruki SUGIYAMA

Current Position: Professor

Affiliation: Department of Applied Chemistry, National Yang Ming Chiao Tung University

Degree: Ph.D. (Science) at Nankai University, P.R. China



Area of scientific Interesting: His current interest is to explore the possibility of the optical trapping method in various chemical research fields, such as chirality, aggregation-induced emission, phase separation, polymorphism, amyloid fibril formation, protein crystallization, photochemical reactions, and so on, and to elucidate their dynamics and mechanism spectroscopically.

Brief Biography:

He received Ph.D. from Nankai University, P. R. China in 2002. He was Designated Instructor (STP) STP: Science and Technology Promotion, Specially-Appointed Instructor, and Specially-Appointed Fellow in the Department of Applied Physics at Osaka University from 2002-2007. At Osaka University, he worked on the fabrication of organic and pharmaceutical nanoparticles by laser ablation in liquid and succeeded in tailoring the smallest organic dye nanoparticles by a top-down method using ultrashort lasers. In 2007, he became Researcher at Hamano Life Science Research Foundation, where he started his current research topic on developing the optical trapping method for crystal chemistry. From 2008 to 2011, he worked as Associate Professor at Nara Institute of Science and Technology. In 2011, he moved to Taiwan and worked at Instrument Technology Research Center, National Applied Research Laboratories, as Associate Researcher and Research Fellow, when he extended his research on optical trapping chemistry. In 2015, he moved to the Department of Applied Chemistry at National Chiao Tung University and served as Associate Professor, and in 2020, and was promoted to full professor. More than ten years have passed since I came to Taiwan. During my stay in Taiwan, I have been conducting various collaborations and student exchanges with many Japanese universities. In this symposium, I would like to share my experiences with you.

Presentation Title: Wonderful International Experience that leads to the Connection between Japan & Taiwan

Name: Chun-Yen LIU

Current Position: Assistant Professor

Affiliation: Department of Materials Science & Engineering

Degree: Ph.D. (Engineering) of Osaka University, Japan

Non-scientific Interests: Movie, music, fitness, travel,

Area of scientific Interesting:

My research expertise is focused on functional polymers, liquid crystal materials and biomaterials. My current research topics are related on the energy saving optical devices, stimuli responsible actuators and artificial tissue engineered materials.



Brief Biography:

- **Work experience**

2019-2022: Assistant Professor, Department of Materials Science & Engineering, Nation Cheng Kung University, Taiwan

2016-2018: Postdoctoral fellowship, Optometry & Vision Science Program, UC Berkeley, USA

2015-2016: Postdoctoral fellowship, Department of Chemical Science & Engineering, Kobe University, Japan

- **Education**

2012-2015 (Ph.D.): Department of Applied Chemistry, Osaka University, Japan

2010-2012 (M.S.): Department of Supramolecular Science, Osaka University, Japan

2005-2008 (B.D.): Department of Plant Pathology & Microbiology, National Taiwan University, Taiwan

Presentation Title:

Interdisciplinary Collaborative Research in the Field of
Rehabilitation and Entrepreneurship Education with the National
Cheng Kung University

Name: Hirokazu KATO

Current Position: Professor

Affiliation: Center for Digital Green-Innovation, NAIST

Degree: Dr. (Eng.) at Osaka University, Japan

Non-scientific Interests: Mountain Trekking

Area of scientific Interesting:

He has promoted research on Human Computer Interaction. In particular, he has been active in research on Virtual Reality (VR) and Augmented Reality (AR) technology. He has also made efforts to apply these technologies to fields such as industry, medicine, sports, and elderly support.

Brief Biography:

- **Work experience**

2007 - Present Professor, Nara Institute of Science and Technology

2003 - 2007 Associate professor, Graduate School of Engineering Science, Osaka University

1999 - 2003 Associate professor, Faculty of Information Sciences, Hiroshima City University

1996 - 1999 Lecturer, Faculty of Engineering Science, Osaka University

1989 - 1996 Research Associate, Faculty of Engineering Science, Osaka University

- **Education**

1996 D. Eng. Faculty of Engineering Science, Osaka University

1988 M. Eng. Faculty of Engineering Science, Osaka University

1986 B. Eng. Faculty of Engineering Science, Osaka University



Presentation Title: Educational Exchange Activities for NAIST and NCCU

Name: Shoji KASAHARA

Current Position: Professor

Affiliation: Div. of Information Science, NAIST

Degree: Dr. Eng. (Kyoto University, Japan)

Area of scientific Interest:

My research interests include stochastic modeling and analytics of large-scale complex systems based on computer/communication networks.



Brief Biography:

- **Work experience**

2012 – Present Professor, Graduate School of Information Science, NAIST

2005 – 2012 Associate Professor, Graduate School of Informatics, Kyoto University

1998 – 2005 Associate Professor, Graduate School of Information Science, NAIST

1997 – 1998 Research Associate, Graduate School of Information Science, NAIST

1993 – 1997 Research Associate, Educational Center for Information Processing, Kyoto University

- **Education**

1991 – 1993 DC, Div. of Applied Systems Science, Grad. Sch. Eng., Kyoto University

1989 – 1991 MC, Div. of Applied Systems Science, Grad. Sch. Eng., Kyoto University

1985 – 1989 Dep. of Applied Math. and Phys., Faculty of Engineering, Kyoto University

Presentation Title: Short impression about educational and research situation of basic plant biology in NCKU and Academia Sinica at Tainan.

* This speech is given by Prof.Mimura with collaboration of Prof.Obayashi.

Name: Tetsuro Mimura

Current Position: Contract Professor

Affiliation: College of Bioscience and Biotechnology,
NCKU-AS Graduate Program in Translational Agricultural Sciences:
National Cheng Kung University, R.O.C.

Degree: Ph.D. at The University of Tokyo, Japan

Non-scientific Interests: Drinking and then Sleeping

Area of scientific Interesting:

My research field is plant cell biology. I had been studying ion metabolism in plants, mainly the role of vacuole and membrane transport. At NCKU, I enjoy doing my own little experiments while giving a few lectures to graduate students.



Brief Biography:

● **Work experience**

2021 – Present Contract Professor, College of Bioscience and Biotechnology, National Cheng Kung University (NCKU) in Taiwan

2004 – 2020 Professor, Graduate School of Science, Kobe University

2000 – 2004 Professor, Faculty of Science, Nara Women's University

1994 – 2000 Associate and Full Professor, Department of Biology, Hitotsubashi University

1990 – 1994 Associate Professor, Faculty of Science, Himeji Institute of Technology

1984 – 1990 Assistant Professor, Faculty of Science, The University of Tokyo

● **Education**

1979 – 1984 Department of Botany, Graduate School of Science, The University of Tokyo

1974 – 1979 Faculty of Science, The University of Tokyo

Name: Iwai Ohbayashi

Current Position: Assistant Professor

Affiliation: College of Bioscience and Biotechnology, National Cheng Kung University, R.O.C.

Degree: Ph.D. at the University of Tokyo, Japan

Non-scientific Interests: Watching baseball, Field works

Area of scientific Interesting:

I have been studying plant molecular genetics in *Arabidopsis thaliana*, using tissue culture system. Recent works are on the hormonal control of plant cell proliferation and organ regeneration.

Brief Biography:

● **Work experience**

2020 – Present Assistant Professor, College of Bioscience and Biotechnology, National Cheng Kung University (NCKU) in Taiwan

2017 – 2019 Postdoctoral Researcher, Haixia Institute of Science and Technology Fujian Agriculture and Forestry University

2015 – 2017 Postdoctoral Researcher, Department of Bioscience and Bioinformatics, Kyushu Institute of Technology

2013 – 2015 Postdoctoral Researcher, Department of Biology, Tokyo Gakugei University

2011 – 2013 Postdoctoral Researcher, Graduate School of Science, The University of Tokyo

● **Education**

2006 – 2011 Graduate School of Science, The University of Tokyo

2002 – 2006 Faculty of Science, The University of Tokyo

Presentation Title: SMART collaboration on forefront topics in organic chemistry

Name: Ilhyong RYU

Current Position: Specially Appointed Professor (OMU) & Chair Professor (NYCU)

Affiliation: Organization for Research Promotion, OMU & Department of Applied Chemistry, NYCU

Degree: Ph.D. (Engineering) at Osaka University, Japan

Non-scientific Interests: Music

Area of scientific Interesting:

Organic synthesis, radical chemistry, catalysis, and greener reaction process using microreactors



Brief Biography:

- **Work experience**

1978-1988 JSPS Posdoc and Research Associate at Osaka University

1988-1995 Assistant Professor at Osaka University

1991-1992 Visiting Scientist at University of Ottawa

1995-1999 Associate Professor at Osaka University

2000-2016 Full Professor at Osaka Prefecture University

2016-current Chair Professor at National Chiao Tung University, now National Yang Ming Chiao Tung University (NYCU) and Specially Appointed Professor at Osaka Prefecture University, now Osaka Metropolitan University (OMU)

- **Education**

1969-1973 Department of Applied Chemistry, Nagoya University

1973-1978 Graduate School of Engineering, Osaka University

1978 PhD, Osaka University

Presentation Title: The Microscopic Connection with NAIST

Name: Fu-Jen KAO

Current Position: Professor

Affiliation: Institute of Biophotonics, NYCU

Degree: Ph.D. (Philosophy) at Cornell University, USA

Non-scientific Interests: Reading, Outdoor

Area of scientific Interest:

My research field is photonics as an enabling tool. I have worked on translating photonics science and technologies for various applications with a focus on biophotonics.



Brief Biography:

- **Work experience**

2021~*now* Professor, National Yang Ming Chiao Tung University, Taiwan

2004-2021 Professor, National Yang-Ming University, Taiwan

2002-2004 Professor, National Sun Yat-sen University, Taiwan

1993-2002 Associate Professor, National Sun Yat-sen University, Taiwan

- **Education**

1988 – 1993 Ph.D., Department of Physics, Cornell University, USA

1985 – 1988 Master of Science, Department of Physics, Cornell University, USA

1979 – 1983 Bachelor of Science, Dept. of Physics, National Taiwan University, Taiwan

Dr. Fu-Jen Kao 's research interests include Optical Physics and Biophotonics. His publication profiles can be found at

<https://www.scopus.com/authid/detail.uri?authorId=57223453506>

https://scholar.google.com/citations?user=Vw_TDrSAAAAJ&hl=en

He has also served as the director of the Institute of Biophotonics (2004-2010) and the associate dean (2009-2011) of the Research and Development Division at National Yang-Ming University. He became the vice president of the Physical Society of Taiwan in 2012 and the president in 2014. He was also the vice president of the Association of Asia-Pacific Physical Societies from 2016 to 2019. Dr. Kao is a Fellow of the Royal Microscopy Society, Taiwan Physical Society, and SPIE.

Recently, Dr. Kao has been working on mapping extremely large biosamples created by expansion microscopy.

Presentation Title: Turning serendipity into planned happenstance with the closest country, Taiwan

Name: Yoichiroh HOSOKAWA

Current Position: Professor

Affiliation: Div. of Materials Science, NAIST

Degree: Ph.D. (Engineering) at Osaka University, Japan

Non-scientific Interests: Origami (<http://hskw.jp/Origami>)

Area of scientific Interesting:

My research field is applied physics regarding to laser and microscope. I have investigated photo-excitation phenomena induced by intense ultra-short laser pulses. This knowledge has been applied to several unique cell manipulation methods for biology i.e., noncontact evaluation of single cell adhesion, evaluation of plant cell wall stiffness using architecture theory, single cell photoporation for animal, plant, and algal cells, and ultra-high-speed cell sorter.

Brief Biography:

- **Work experience**

2016 - Present Professor, Nara Institute of Science and Technology

2015 - Present Adjunct Associate Professor, Institute of Biophotonics, National Yang Ming University (National Yang Ming Chiao Tung University)

2014 - 2016 Associate Professor, Nara Institute of Science and Technology

2008- 2014 Research Associate Professor, Nara Institute of Science and Technology

2003- 2008 Postdoctoral Fellow, Japan Science and Technology Agency (JST)

2000- 2003 Postdoctoral Fellow, Graduate School of Engineering, Osaka University

- **Education**

1995 – 2000 Graduate School of Engineering, Department of Applied Physics, Osaka University. Awarded PhD's degree in Applied Physics at 2000.

1991 – 1995 Faculty of engineering, Department of Applied Physics, Osaka City University

