Recent Invited Presentations (from 2005)

1. 田家炳學術講座, Department of Photonics, National Chiao Tung University, Hsin Chu, Taiwan, Hsin Chu, Taiwan, 12/13/2019
   “Think Out-of-the-Box – Personal Experience on Semiconductor Research”

2. Cape Town University, Department of Chemical Engineering, Cape Town, South Africa, August 10, 2019
   “Opportunities of Electrochemical Reactions in Semiconductor Fabrication”

3. Keynote speech, 70th Annual Meeting of International Society of Electrochemistry, Durban, South Africa, August 4-9, 2019
   “Opportunities of Electrochemical Reactions Processes in Electronics and Optoelectronics Production”

   “A Review of a Plasma Based Copper Etch Process and Reliability”

5. Osaka University, Center for Atomic and Molecular Technologies (CAMT), June 26, 2019
   “A Review of a Plasma Based Copper Etch Process and Reliability”

6. National Taiwan University, Department of Chemical Engineering, June 18, 2019
   “Semiconductor Research-Nana,Giga,and Opto Electronics”

   “Plasma as a Dry Electrochemical Process for Electronic Device Fabrication – discussion on the initial reaction stage”

8. Osaka University, Center for Atomic and Molecular Technologies (CAMT), June 7, 2019
   “Plasma Deposition and Etching Processes in Semiconductor Fabrication and Beyond”

9. 7th International Semiconductor Conference on ULSI vs. TFT, Kyoto, Japan, May 19-23, 2019
   “Nano-resistors based devices – effects of size and structure on performance”

10. Department of Electrical Engineering, University of Houston, March 29, 2019
    “Generalization of ULSICs, TFTs, and SSI-LEDs”

11. Department of Applied Physics, Polytechnic University, Hong Kong, Dec. 11, 2018
    “Amorphous High-k Metal Oxide Dielectrics for Multifunctional Applications”

12. Physics Department, National Sun Yet-Sen University, Kaoshiung, Taiwan, Dec. 1, 2018
    “Solid State Incandescent Light Emitting Devices (SSI-LEDs).”

13. Department of Electrical Engineering, Min Shin University of Science and Technology, HsinChu, Taiwan, Nov. 28, 2018
“Generalization of ULSICs, TFTs, and SSI-LEDs”

20. Department of Materials Science and Engineering, National Tsing Hua University, Hsin Chu, Taiwan, Nov. 28, 2018
   “Amorphous High-k Metal Oxide Dielectrics for Multifunctional Applications”

21. Department of Photonics, National Chiao Tung University, Hsin Chu, Taiwan, Nov. 27, 2018
   “Solid State Incandescent Light Emitting Devices (SSI-LEDs)”

22. School of Information Science and Technology, Fudan University, Shanghai, China, Nov. 16, 2018
   “Generalization of ULSICs, TFTs, and SSI-LEDs”

23. Department of Electronic Engineering, Shanghai Jiao Tong University, Shanghai, China, Nov. 16, 2018
   “Solid State Incandescent Light Emitting Devices (SSI-LEDs)”

24. Visonox Technology Inc., Kunshan, Jiangsu, China, Nov. 14, 2018
   “Development of Thin Film Transistor Technology”

25. Plenary speech, Workshop on Displays, Shanghai Jiao Tong University, Shanghai, China, Nov. 14, 2018
   “Thin Film Transistor Technology - Past, Present, and Future.”

   “Thin Film Transistor Technology – from Past to Future”

27. Plenary speech, Korea Electrochemical Society annual meeting, Yeosu, Korea, Nov. 1, 2018
   “Electrochemical Reaction Applications in Semiconductor Production – What have been done and what more can be done”

28. Chinese Academy of Sciences, Microelectronics Institute, Beijing, China, Oct. 29, 2018
   “Amorphous High-k Metal Oxide Dielectrics for Multifunctional Applications”

29. Microelectronics College, Beijing University, Beijing, China, Oct. 29, 2018
   “Generalization of ULSICs, TFTs, and SSI-LEDs”

30. Symposium Thin Film Transistor Technologies 14 (TFT 14), 234th ECS Meeting, Cancun, Mexico, Sept. 30 - Oct. 4, 2018
   “Characteristics of Top- and Double-Gate a-IGZO Thin Film Transistors Illuminated with Lights of Different Wavelengths”

31. Symposium Visible and Infrared Phosphor Research and Applications of the Luminescence and Display Materials, ECS 234th Meeting, Cancun, Mexico, 10/2018
   “Material and Structure Effects on Light Emission of SSI-LEDs”

32. ECS Japan National Meeting, Kanazawa, Japan, Sept. 26, 2018
   “Past, Current, and Future of the 116-Year Old Electrochemical Society”

33. 26th International Symposium “Nanostructures: Physics and Technology,” National Academy of Sciences of Belarus and the Ioffe Institute, Minsk, Belarus, June 18-22, 2018
   “SSI-LED: Nano-resistors Formation, Electrical and Optical Properties, and
Applications

34. Keynote speech, 22\textsuperscript{nd} Topical Meeting of the International Society of Electrochemistry, Tokyo, Japan, 04/15-18/2018.

35. North China Electric Power University, Beijing, China, 03/16/2016
   “Amorphous Metal Oxide Thin Films in MOSFET, Nonvolatile Memory, and Optoeletronic Applications.”

36. Chinese Academy of Sciences, Microelectronics Institute, Beijing, China, 03/15/2016
   “Research from Giga to Nano to Optoelectronics with Breakthroughs Along the Path”

37. Symposium of Low-Dimensional Nanoscale Electronic and Photonic Devices 8, ECS 228\textsuperscript{th} Meeting, Phoenix, 10/15/2015.
   “A Metal Oxide Antifuse-Diode Device”

38. International Symposium on Sputtering and Plasma Processes (ISSP 2015), Kyoto, Japan, 07/08/2015
   “SSI-LED Made by Sputtering”

39. Kochi Technical University, Japan, 07/06/2015
   “Interdisciplinary Semiconductor Science and Technology – Past and Future”

40. Plenary speech, 22\textsuperscript{th} International Workshop on Active-Matrix Flat Panel Displays and Devices, Kyoto, Japan, 07/01/2015
   “Principles and possible system-on-wafer applications of SSI-LEDs”

41. Symposium Silicon Compatible Materials, Processes, and Technologies for Advanced Integrated Circuits and Emerging Applications 5, ECS 227\textsuperscript{th} Meeting, Chicago, 05/27/2015.
   “Temperature Influence on Current Leakage and Hysteresis of Nc-CdSe Embedded Zr-Doped HfO High-\textit{k} Dielectric Nonvolatile Memory”

42. Gordon E. Moore Medal Award for Outstanding Achievement in Solid State Science and Technology Speech, ECS 227\textsuperscript{th} Meeting, Chicago, 05/26/2015
   “Research on Nano and Giga Electronics – Breakthroughs Along the Path”

43. Electrical Engineering Department, King Abdullah University of Science and Technology (KAUST), Jeddah, Saudi Arabia, 04/16/2015
   “Doped Metal Oxide High-\textit{k} Dielectrics and Applications from Gate dielectric to Nonvolatile Memories and Solid State Light Emitting Devices”

44. China Semiconductor Technology International Conference (CSTIC), 03/15/2015
   “ECS Past, Present, and Future”

\textit{Home, TFTs, High \textit{k} Gate Dielectrics, Low \textit{k} dielectrics, RIE, PECVD, Biochips, Laboratory, Publications, Activities, Links}