

DAILY PROGRAM

Wednesday
September 20

2017

IDMC'17

International Display Manufacturing Conference

Taipei World Trade Center Nangang Exhibition Hall, Taiwan, September 20-22, 2017

國際顯示製程前瞻技術研討會

DAILY PROGRAM

Wednesday, September 20

13:00-13:10

Room 401

Opening Ceremony**Opening Remarks**

Chairman Paul SL Peng, AU Optronics Corporation
 President Yong-Seog Kim, The Society for Information Display

13:10-13:40

Room 401

Keynote Speech 1

Chair: Janglin Chen, Industrial Technology Research Institute, Taiwan

Display Technologies with Continuous Innovations

Michael Tsai, AU Optronics Corp. (*Taiwan*)

Over the years, display technologies have undergone a great evolution marked by fierce competition. Only the technologies that have created brand value and met customer demand could stand out as leaders. As new technological products, applications and services rise, displays have become even more versatile. AUO will continue to enhance its technological innovation and management, creating value and shaping an amazing world for all eyes to see.

**Biography****Profile :****Education :**

- EMBA, National Chiao Tung University
- Bachelor of Business Administration, National Cheng Kung University

Experience :

- Senior Vice President and General Manager of AUO Video Solutions Business Group
- Vice President and General Manager of AUO Information Technology Business Group
- Senior Associate Vice President of AUO Information Technology Display Manufacturing
- AUO Associate Vice President of Procurement
- Director of Material Management and Logistics at AUO's Suzhou module plant

13:40-14:10

Room 401

Keynote Speech 2

Chair: Janglin Chen, Industrial Technology Research Institute, Taiwan

Designing Great Displays for Virtual and Augmented RealityNikhil Balram, Google (USA)

The display is a critical component for providing wonderful immersive experiences in virtual and augmented reality. A number of careful design choices and tradeoffs have to be made to create the best possible display subsystems for VR and AR.

Biography

Dr. Nikhil Balram leads display R&D for virtual and augmented reality at Google Inc. He has won numerous awards including most recently the 2016 Otto Schade Prize from the Society for Information Display. Products and technologies developed by teams led by him have been used by millions of people. Dr. Balram is also an adjunct professor of electrical engineering at Carnegie Mellon University (CMU), a guest professor of design and innovation at the Indian Institute of Technology in Gandhinagar, India, and a former visiting professor of vision science at the University of California, Berkeley. He has over 100 US and international patents granted or pending, more than 50 technical publications, including two invited book chapters, and has given over 25 keynote speeches at major conferences and events worldwide. He received his B.S., M.S. and Ph.D. in electrical engineering from CMU.

14:10-14:40

Room 401

Keynote Speech 3

Chair: Janglin Chen, Industrial Technology Research Institute, Taiwan

Driving Forces – How Needs of Tomorrow Influence Technologies of Today
Roman Maisch, Merck Performance Materials Ltd. (Germany)

For example, the mobility needs of modern societies, cities and users are different from the past. Consequently, the dynamic changes of the automotive industry trigger both challenges and opportunities. The presentation will discuss these trends and plausible future scenarios. In order to facilitate these positive changes, Merck recognized the potential of between users and devices / vehicles, key industry players have acknowledged its significant role in attaining user's satisfaction. The presentation will outline several initiatives driving technology developments to fulfill the emerging needs.

Biography

Education: Ph.D. in metallo-organic Chemistry, Julius-Maximilians University of Wurzburg.

Experience: More than 30 years with Merck in different management positions. Since 2004 responsible as Senior Vice President for Marketing & Sales for Display Materials of Merck.

Awards/Honors/Patents/Publications:

About 30 publications and lectures in industry related magazines, and conferences.

Winner of the Germany Innovation Award 2015

for a new high transmittance, energy saving, LC- technology, also winner of Meyer – Galow price 2014 in industrial chemistry.

14:40-15:10

Room 401

Keynote Speech 4

Chair: Janglin Chen, Industrial Technology Research Institute, Taiwan

35 Years Innovations in FPD ManufacturingJun Souk, Korea University (*South Korea*)

The FPD manufacturing technology evolved to current high efficient level since the first production of 10.4" TFT-LCD in 1988. The progress of equipment, fab automation and many innovative ideas contributed the evolution in manufacturing. We review the landmark innovations during the progress in LCD and OLED manufacturing. Also, future prospect of flexible OLED printed OLED-TV and QLED manufacturing is discussed.

Biography

Professor, Korea University, Sejong, Korea

- 2016.11 - present: Professor, Research and Business Foundation, Korea University, Korea
- 2012.3- 2016.10: Professor, Professor, Electronic Engineering & Display Engineering, Hanyang University, Seoul, Korea
- 1996- 2012 Jan: EVP/CTO, Head of Display R&D Center, Samsung Electronics
- 1979-1996: IBM T.J. Watson Research Center

Over 30 years of Experiences in TFT-LCD and Future Display technologies in the field of OLED, Flexible display, Printed Electronics

Broad knowledge and experience in display process, material, equipment in LCD and OLED.

- Published over 60 research publications
- Gave more than 60 invited talks at international conferences
- Book "Flat Panel Display Manufacturing", chief editor, Wiley & Sons, 2017
- 2012 : Karl Ferdinand Medal Award (SID)
- 2009: Elected SID Fellow

15:10-15:40

Room 401

Keynote Speech 5

Chair: Janglin Chen, Industrial Technology Research Institute, Taiwan

Reflective Technology in a Connected World

Frank (Fu-Jen) Ko, E Ink Holdings Inc. (Taiwan)

Displaying images without the need for a light source is the main feature of any reflective display. As the number of wirelessly connected device soaring, ultra-low power consumption, the natural benefit of reflective display technology, becomes a critical factor. As reflective display technology keeps making breakthroughs, the application of reflective display is more diversified in recent years. Let's explore the advancement of reflective display and join the trend of variously creative applications.

**Biography**

Dr. Frank (Fu-Jen) Ko is currently the Chairman and CEO of E Ink Holdings Inc. Dr. Ko joined E Ink in December 2013 as the Chief Strategy Officer, including responsibility for company future growth strategies and management planning.

Dr. Ko received his M.Sc and Ph.D. in Photonics from National Chiao-Tung University in 2000 and a B.Sc in Electro Physics in 1995. Dr. Ko joined Unipac (now AU Optronics) in year 2000 and had worked in several positions in R&D department and Business Unit. Dr. Ko was the General Manager of Television Business Group and VP of Technology and Strategic Planning office in AU Optronics.

15:40-16:10

Room 401

Keynote Speech 6

Chair: Janglin Chen, Industrial Technology Research Institute, Taiwan

This Is the Glass Age - How Glass Is Shaping the Future of the Display IndustryChristopher S. Hudson, Corning Display Technologies (USA)

Mr. Hudson will discuss the current state of the LCD business and will examine some of the trends – including the large and slim screen size migration, TV replacement and the increase in Gen 10.5 panel capacity – that are likely to influence the evolution of the industry. He also will offer insights on the innovative use of precision glass for the future of displays as well as the new applications in automotive industry that will continue to play an important role in this changing environment.

Biography

Chris Hudson has served as commercial director of Corning Display Technologies since October 2014. In this role, he has global responsibility for display pricing, forecasting, market and competitive intelligence, product line management, and communications.

Prior to this role, Hudson was the commercial director for High Performance Display (HPD). He led a commercial organization responsible for the development and implementation of customer and product strategy, commercial operations, and marketing communications. Hudson joined Corning in 2001 as a market analyst in Corning Lasertron. Following the divestiture of Corning Photonics to Avanex, he held roles in both strategic marketing and product line management.

Hudson rejoined Corning in November 2004 as competitive intelligence manager for Specialty Materials, later assuming the same role in Display Technologies. He subsequently held several commercial and program roles within Display.

Prior to joining Corning, Hudson served in the U.S. Army for eight years as an intelligence officer.

Hudson holds a Bachelor of Science degree from Syracuse University and a Master of Business Administration degree from Babson College.

16:10-16:40

Room 401

Keynote Speech 7

Chair: Janglin Chen, Industrial Technology Research Institute, Taiwan

Accelerating Advance Display Fab Yield Ramps with Novel Display Yield Equipment (DYE) EcosystemYong Gao, Applied Materials (*China*)

Modern high resolution OLED and LCD display manufacturing requires greater emphasis on defect reduction and process control. Applied Materials' world first inline Electron Beam Review (EBR) system integrates Semiconductor SEM with AKT's large-scale vacuum platform. Auto process inspection (API) and critical dimensions (CDs) measurement enable customers' most challenging process control spec. Features a precision stage, auto defects review (ADR) module registers the defects based on AOI coordinates and determines root cause of killer defects aided with EDX. Bringing Semiconductor yield methods of inline SEM enables high yielding reliable flexible OLED displays and accelerates world largest substrate LCD yield ramp.

Biography**Education:**

- Yong Gao holds a Ph.D. in Material Science and Engineering from The University of Arizona.

Experience:

- Dr. Yong Gao is currently working as Senior Business Development Manager for Applied Materials Display and Flexible Technology Group, where he is responsible for assisting display customers improve the yield with E-beam review and testing products. Prior to Applied Materials, Yong Gao served more than 10 years with KLA-Tencor, a supplier of process control and yield management solutions for the semiconductor and related industries, where he held positions in product development and marketing of Inspection and Metrology systems.

16:40-17:10

Room 401

Keynote Speech 8

Chair: Janglin Chen, Industrial Technology Research Institute, Taiwan

Latest FPD Technologies of Japan Display Inc.Akio Takimoto, Japan Display Inc. (*Japan*)

- Development strategy of Japan Display Inc. will be mentioned. Especially, newly developed displays will be introduced in details.
- FULL ACTIVE™ and sheet OLED display are excellent in design flexibility.
- Advanced-LTPS LCD realizes circuit power-saving.
- Each display is suitable for various mobile use applications, such as smartphone and automobile.

**Biography**

Dr. Takimoto has been engaged in display industry at Matsushita Electric Industrial Co., Ltd. after his graduation from the University of Tokyo. Since 2012, he worked as Senior General Manager of TFT & LCD development department in Research and Development Division of Japan Display Inc. And he has been serving as CTO and Division Manager of R&D Center since 2016.