

## IMID 2017 Program

- Keynote Addresses
- Tutorials and Workshops
- Technical Sessions
- Industrial Forum
- Special Exhibition
- Welcome Reception
- Banquet
- Exhibition



## Keynote Speakers



**Dr. In Byeong Kang**  
(LG Display Co., Ltd., Korea)



**Dr. Xiaolin Yan**  
(TCL Corp., China)



**Prof. Ching W. Tang**  
(Univ. of Rochester, USA)



## Key Dates

Paper Submission	March 31 (Fri.)
Acceptance Notification	May 25 (Thu.)
Pre-registration	June 15 (Thu.) ~ August 10 (Thu.)

## Paper Submission

IMID 2017 cordially invites you to submit papers for oral and poster presentations. Papers received by March 31, 2017 will be considered under the standard review procedure. Papers must be submitted via the official website ([www.imid.or.kr](http://www.imid.or.kr)). All authors accepted for presentation must register for the conference through the website before August 10, 2017 in order to confirm their participation.

## Award

IMID Award Committee will select the winners of the KIDS Awards (Sponsored by LG Display, Samsung Display) and Best Poster Presentation Awards (About 20 papers) based on the research originality and technical significance of the submitted papers. You can find the detailed information for Awards of IMID 2017 on our website (<http://imid.or.kr/2017/awards.asp>).

## About Busan

Located at the southern tip of the Korean peninsula, Busan is the second largest metropolis in Korea and is home to the country's longest river, longest beach, and its largest port. Its geography includes a coastline featuring superb beaches and scenic cliffs, mountains which provide excellent hiking and extraordinary views with hot springs scattered throughout the city. Busan enjoys four distinct seasons and a temperate climate that never gets too hot or too cold. For this reasons, the busan is becoming a world class city for tourism and culture and a hot spot destination for international conventions.

First Call for Papers

[www.imid.or.kr](http://www.imid.or.kr)



# iMiD 2017

August 28-31, 2017 / BEXCO, Busan, Korea

Paper Submission Deadline (only 1Page):

## March 31, 2017



Organized by

The Korean Information Display Society(KIDS) 

The Society for Information Display(SID) 

Korea Display Industry Association(KDIA) 



On behalf of the organizing committee of the IMID 2017, I would like to sincerely appreciate your attention to the IMID 2017 to be held at BEXCO, Busan, Korea during August 28~31, 2017.

IMID 2017 continues a series of annual conferences in 2001, organized by the Korean Information Display Society (KIDS), the Society for Information Display (SID), and the Korea Display Industry Association (KDIA). The IMID has become a premier conference for academic, industry, and business leaders to meet, publish results and share knowledge beginning in 2001 the information display.

The conference includes keynote presentations, technical oral presentations, tutorials, workshops, poster presentations, special exhibition, and industrial forum. The IMID 2017 will be a great opportunity for everyone attending to enrich their professional network.

We truly hope that you will take this chance to join us in Busan. There will be many attractive social events for participants to experience and enjoy the Korean culture. The conference site, BEXCO, is a well-known conference center located in the landmark area of Haeundae Beach, which is a newly developed area attracting millions of people to the beach annually.

We believe that this conference will surely serve as one of the most rewarding and memorable meetings for all of us. All the members of the organizing committee are looking forward to meeting you at Busan, Korea.

Thank you.

**Sang Deog Yeo**

General Chair of IMID 2017  
President of LG Display Co., Ltd



## 1. Special Session I: Solution Processed OLEDs

Materials, process, and device technologies for the solution processed OLEDs and organic-inorganic hybrid LEDs (OIH-LEDs); Soluble organic materials for OLEDs; solution-processed inorganic and organic-inorganic hybrid emitting materials and their devices; device architecture for efficient and reliable OLEDs and OIH-LEDs fabricated by solution process; device physics and characterization to investigate characteristics of solution processed OLEDs and OIH-LEDs; device stability and degradation analysis; OLED manufacturing processes utilizing solution-process such as ink-jet printing/patterning; transparent electrodes; flexible and transparent OLEDs and OIH-LEDs fabricated by solution process; white OLEDs and lighting fabricated by solution process.

## 2. Special Session II: LTPS for Flexible Display

Advances in development and implementation of LTPS TFT backplane technology for all kinds of mobile displays and electronic devices; Technology including advanced crystallization, ion implantation/activation, processes on flexible substrate, solution process, transfer method, less-mask process; cost-effective equipment with enhanced throughput for large area substrate; device structures with performance including high mobility, improved uniformity, and long-term stability (NBTI and PBTI); implementation of high resolution (>1000 ppi) and large area AMLCD/AMOLED (integrated circuits for pixels and peripheral drivers) and other new applications.

## 3. Special Session III: Quantum Dots

Semiconductor nanocrystal quantum dots for light-emitting applications; Quantum dots for high color-gamut displays; Stability of quantum dots and QD enhancement film; Optical properties of quantum dot films; Down-conversion / electroluminescence devices; Solid state lighting and lasers.

## 4. Special Session IV: AR / VR

Technologies and applications in the emerging area of augmented and virtual reality (AR / VR); Display technologies for AR / VR Systems; spatial tracking, localization, mapping, and navigation techniques; end-to-end system integration and latencies; inputs, interfaces, and interactions; human factors and user experience considerations; mapping and rendering of virtual objects onto the physical world; object, human, and scene capture; reconstruction, recognition, and understanding; biometrics and user authentication; AR / VR applications.

## 5. Special Session V: Stretchable / Deformable Materials and Electronics

Advances in the innovative development of stretchable electronics, enabling new applications for wearable devices such as patchable E-skin sensors and foldable/stretchable displays; All aspects of stretchable / wearable displays and electronics including materials, designs, modeling, novel processes, and technologies for fully elastic electronic devices; specific applications of highly compliant electronics including TFTs and circuits; optoelectronic devices for displays, and sensors.

## 6. 2D Materials for Display

Graphene and other 2D materials for displays and flexible / wearable electronics; Graphene including functionalized graphene materials (graphene oxides, etc), graphene-based composite materials, graphene quantum dots; transition metal dichalcogenides (TMDCs); black phosphorous (phosphorene); hexagonal boron nitride (h-BN); other 2D or layered materials and heterostructures of 2D materials; advances in large-scale or high-quality synthesis of 2D materials; novel characterization methods and processes for 2D materials; applications to displays and flexible / wearable electronics; issues in commercialization of graphene and other 2D materials.

## 7. Active-Matrix Devices

Advances in development and implementation of active-matrix backplanes and all of displays & devices with active-matrix backplanes; Active-matrix e-papers, LCDs & OLEDs for TV, monitor, note-PC, mobile device and all informative displays; bezel-less display technology; novel and high performance active-matrix display devices and system-on-panel (SOP); backplane technologies for e-papers, AMOLEDs & high performance LCDs; micro & nano-crystal silicon, organic, and carbon nanomaterials based TFTs; all aspects of solution processed & printed TFTs; non-oxide, quantum dot, perovskite, and other rising semiconducting materials for TFTs.

## 8. Applied Vision / Human Factors

New display technology has driven displays to have more pixels, greater contrast, higher brightness, and richer color volume, thus enabling a wide range of new visual experiences; Submissions are encouraged that discuss the benefits and tradeoffs of how these new display technologies as well as novel uses of traditional display technology can have a measurable impact on the visual experience. Topics in the following areas are particularly in demand: mitigating the challenges by presenting comfortable and engaging 3D imagery (including autostereoscopic, AR, and VR form factors), effective use of a wider color volume to create a more immersive and compelling experience, and approaches to take advantage of limitations of the visual system to process or transmit display data more efficiently. Papers that discuss novel methods of user interaction and HMI with display systems are also welcomed.

## 9. Display Electronics and Systems

Progresses in display systems and display electronics; Mobile display systems; Wearable display systems; ultra-low-power displays; ultra-high-resolution display systems; TFT circuits (driving methods and circuits for display devices and systems); driver ICs; image signal processors; image quality enhancement methodologies and systems; display interface technologies; driving electronics of touch panel.

## 10. Display Manufacturing and Equipments

Advances in process and equipment technologies for displays; Thin and thick film deposition, lithography, etching, cleaning, printing, and various plasma applications; process & equipment technologies for new and emerging displays including flexible & wearable applications; display equipments including deposition, lithography, printing, etching, cleaning, and various plasma applications; manufacturing issues of breakthroughs in the displays such as performance, cost reduction, high throughput and flexibility; material issues in display process, including synthesis or deposition of emerging materials; process & equipment technology for display circuits and interfaces.

## 11. Display Optics - 3D Displays

Advances in 3D Display Systems and Optics; 3D display systems including stereoscopic / autostereoscopic / multi-view / super-multi-view / volumetric / holographic displays; 3D contents generation including 3D image capture and 2D-3D contents conversion; user-interaction with 3D displays; 3D image formats and standards; 3D image compressions; measurement and performance evaluation for 3D Displays; human factors; optical technologies for various display systems and devices including LCD and OLED, signage, wearable / near eye displays, backlight units, and transparent displays.

## 12. LC Technologies

Advances in the liquid-crystal sciences and technologies; Liquid crystal materials, alignment controls, LC-Modes, modelings, and devices; LC technologies and materials for flexible displays; LC-polymer / nanoparticle composite materials and devices; advanced LC technologies for high performance and transparent LCDs, reflective and transmissive LCDs; bi-stable LCDs, fast switching LCDs such as optically isotropic LCs, flexoelectric LCs, ferro- / antiferro-electric LCs and biaxial LCs, etc; colloidal LCs and applications; other LC-related electro-optic devices.

## 13. Lighting Materials and Applications

All aspects of solid-state lighting with focus on advances in materials and application technologies for lighting devices; New development of lighting materials, LED display, and LED / OLED lighting convergence applications including white LEDs, micro LEDs, back-light units, phosphors, optics, heat dissipation, design of processes, LED / OLED lighting driving circuits; characterization / reliability, standardization / certification, photometry, engine / cooling / optics, and lighting modules; novel convergence technologies for various applications.

## 14. OLED Frontplanes

All aspects of advances in the OLED display and lighting technologies; OLED materials; device architecture for high-performance and reliable OLEDs; device physics and characterization; OLED manufacturing; OLED electrodes; flexible and transparent OLEDs; white OLEDs for displays and lighting; encapsulation, reliability, and scale-up; applications, standards and policy.

## 15. Organic Photovoltaics

Photovoltaic materials (organic, DSSC, organic/inorganic hybrid), device physics, interfaces and contacts, morphology, degradation and lifetime; Low-cost large area printing technology, electrodes (cathodes and transparent conductors), and encapsulation technologies.

## 16. Oxide TFTs

Advances in development and implementation of all aspect of amorphous oxide related semiconductor thin film transistors; Novel active-matrix LCDs & OLEDs for TV, monitor, note-PC and mobile device with oxide semiconductors; backplane technology for AMOLEDs & high-performance LCDs; micro & nano-crystal oxide TFTs; transparent oxide TFTs; evaluation for materials and devices; theoretical and experimental analysis; novel active materials, process, structure, analysis, and devices with oxide semiconductor. high mobility, stability, crystallinity, oxide & device defects, and other related issues.

## 17. Touch and Interactive Displays

All aspects of recent developments on touch and interactive display technologies including materials, components, circuits, system integrations, touch gesture & motion controls, and interactive input sensor & feedback actuator; Materials, devices and systems for touch and interactive panel; touch and interactive controller design and integration, display-integrated touch and interactive systems, very-large-scale integration of touch for consumer products, dual- and multiple-touch systems and their adoption; existing and emerging touch applications; interactive user interface and new user interface technologies with motion / gesture sensing and feedback.

## 18. Transparent & Flexible Displays

All aspects of transparent and flexible system: displays, devices, and materials; Advances in transparent LCD and OLED panel designs, user experience / interfaces and processes for the haze reduction, transmittance improvement, high-pixel density and large size application; advances in flexible display panel designs, flexible substrates including substrate handling technologies, flexible backplanes, thin-film encapsulation technologies, fabrication processes; transparent and flexible electronics-related materials, device physics, and measurement and characterization.

## 19. 3DSA

Advances in recent development of 3D systems and applications; 3D coding & transmission, 3D displays & systems, 3D system for AR / VR, 3D contents and applications; holographic technology, free viewpoint image systems, ultra-realistic AV systems, interactive systems, human brain sensing, multi-modal / cross-modal systems, and other related topics.