

COLLOQUIUM (2016-8)

School of Materials Science & Engineering

“Foldable and Rollable Displays”

Prof. Jang, Jin

(Department of Information Display, Kyung Hee Univ.)

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Foldable and Rollable Displays

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➤ **Speaker** : 장진 교수 (경희대학교)

➤ **Biography**:

Jin Jang is a Professor at Department of Information Display of Kyung Hee University. He developed world 1st, full color TFT-LCD on plastic, Flexible AMOLED, Transparent AMOLED, 3D AMLCD with wire-grid polarizers which were presented at the SID Conferences. He is the author or co-author of over 500 papers in SCI Journals such as Nature, Advanced Materials, Advanced Functional Materials, Advanced Energy Materials, Energy Environmental Science, Applied Physics Letters, IEEE TED and IEEE EDL. He is currently a Director of Advanced Display Research Center (ADRC). He is a Fellow of SID. He was awarded George Smith Award from IEEE in 2012 and Slotto Owaki Prize from SID in 2015. He had served as a Program Chair and a General Chair of SID in US and also IMID Korea Society of Information Display.

Abstract

Recent issues for flexible AMOLED will be discussed for foldable and rollable display applications, such as TFT backplane, OLED and encapsulation technologies. Especially, I will focus on our recent developments on BA (bulk accumulation) TFTs based on oxide semiconductor and nonlaser detach technologies of TFT backplanes from carrier glass with a CNT/GO buffer layer. The advantages of BA oxide TFTs are high drain current which is 3 to 5 times of that of conventional oxide TFT and also excellent mechanical and bias stabilities. These technologies can be used for highly robust TFT, TFT circuits and foldable and rollable AMOLED.