

# FRIDAY, MAY 25

Session 60

Display Manufacturing

## DISPLAY MANUFACTURING : DEPOSITION METHODS

Friday, May 25 / 9:00 10:20 am / Room 102

**Chair:**

Greg Gibson, FAS Technologies, LLC, Dallas, TX, U.S.A.

**Co-Chair:**

Toshiaki Arai, Sony Corp., Kanagawa, Japan

**60.1: Invited Paper: Low-Temperature Thermal CVD (9:00)  
Process for Thin-Film Encapsulation of Organic Light-  
Emitting Devices**

*C. Chen, A. Kumar, C. Lee  
International Display Systems, Fremont, CA, U.S.A.*

A low-temperature thermal CVD process (LT-TCVD) to fabricate a mechanically robust and thermally stable polymer thin film has been developed. This polymer thin film is not only free of pinholes but also has good step coverage and is applicable as a part of the encapsulation layer of an OLED device.

**60.2: Research on Next-Generation Manufacturing Methods  
of PDPs via Lift-Off Process (9:20)**

*E. Morinaga, R. Satoh, H. Miyagawa, R. Usui, Y. Iwata  
Osaka University, Osaka, Japan*

*K. Nakagawa  
Asahi Glass Co., Ltd., Osaka, Japan*

A multilayer lift-off process was studied for the patterning of PDP electrodes. A theoretical analysis of the resist profile solved the residue problem, and the experimental samples demonstrated the feasibility of proposed next-generation manufacturing method.

**60.3: Advanced Application of Direct Laser Process on SnO<sub>2</sub>  
Thin Films for FPDs (9:40)**

*R. Usui, R. Satoh, Y. Mihara, E. Morinaga, Y. Iwata  
Osaka University, Osaka, Japan*

A Nd:YAG-laser-processing approach was investigated as an alternative technique to the photolithography etching process. Laser-processed pure and doped SnO<sub>2</sub> thin films as next-generation material for the transparent electrode that ITO is currently used for will be described. It was found the laser process could be utilized for mass production.

**60.4: Single-Layer Metal Interconnection for TFT-LCDs Using Direct Contact with ITO and a-Si by Al-Ni System (10:00)**

*T. Kugimiya, Y. Yoneda, K. Yoshikawa  
K. Kaken, Inc., Hyogo, Japan*

*H. Gotoh, N. Kawakami  
Kobe Steel, Ltd., Kobe, Japan*

An Al-Ni alloy interconnect and the a-Si nitridation process, which realize a direct contact of Al alloy with both ITO and a-Si, will be discussed. Single-layer metal interconnection without additional stacked metal was realized for the low-cost manufacturing.

**BREAK (10:20–10:40)**

**AUTHOR INTERVIEWS (12:00–1:00)**