
a-Si AMOLEDs

Thursday, May 24 / 2:00 – 3:00 pm / Ballroom A

Chair:

Takatoshi Tsujimura, Kodak Japan, Ltd., Kangawa, Japan

Co-Chair:

Mike Hack, Universal Display Corp., Ewing, NJ, U.S.A.

52.1: System Design for a Wide-Color-Gamut TV-Sized AMOLED Display (2:00)

*J. Hamer, A. D. Arnold, M. Itoh, K. Miwa, C. I. Levey,
J. E. Ludwicki, D. C. Scheirer, S. A. Van Slyke
Eastman Kodak Co., Rochester, NY, U.S.A.*

The development of an AMOLED display based on a-Si TFT technologies for TV application will be described. Issues such as power consumption, operational stability, color gamut, and manufacturing technologies will be addressed.

52.2: A Low-Cost Stable a-Si AMOLED Display with Full V_T -Shift and V_{OLED} -Shift Compensation (2:20)

*G. Chaji, S. Alexander, A. Nathan, C. Church
IGNIS Innovation, Inc., Waterloo, Ontario, Canada*

*S. J. Tang
Chunghwa Picture Tubes, Ltd., Taoyuan, Taiwan, ROC*

A new simple pixel circuit for a-Si AMOLEDs and a 9-in. WVGA (800 × RGB × 480) prototype will be described. The use of conventional AMLCD drivers compensated for TFT and OLED instabilities will be described. Excellent stability and immunity to temperature variation during testing was observed.

52.3: A 2.2-in. qqVGA AMOLED Driven by a-Si:H TFT with an Active Layer Deposited at Room Temperature (2:40)

*J.-S. Jung, K.-B. Park, M.-K. Ryu, S.-Y. Lee, J.-Y. Kwon
Samsung Advanced Institute of Technology, Kyunggi-do,
Korea*

A 2.2-in. AMOLED display using a-Si TFTs will be described. An a-Si channel layer was deposited by ICP CVD at room temperature. A field-effect mobility of 0.07 cm²/V-sec, threshold voltage of 6 V, off current of 2 pA, and a 10⁻⁶ on-off ratio were observed. An active-matrix backplane was fabricated with a conventional 2-TFT/1-capacitor pixel circuit.

BREAK (3:00–3:40)**AUTHOR INTERVIEWS (5:00–6:00)**