OLED LIFETIME I

Wednesday, May 23 / 3:30 – 4:50 pm / Ballroom B

Chair:
Julie J. Brown, *Universal Display Corp., Ewing, NJ, U.S.A.*

Co-Chair:
Denis Y. Kondakov, *Eastman Kodak Co., Rochester, NY, U.S.A.*

30.1: ***Invited Paper:*** **OLED Lifetime Issues in the Mobile-Phone Industry** **(3:30)**

A. Lääperi
Nokia, Espoo, Finland

The lifetime of OLED displays has been a hot topic for the last 7 years. Yearly improvements have been significant. In addition to lifetime, image-sticking issues has been discussed and some OLED manufacturers have reported the image-sticking times.

30.2: **Improving Operating Lifetime of OLEDs with Perylene and Derivatives as Aggregating Light-Emitting-Layer Additives** **(3:50)**

V. Jarikov, J. R. Vargas, D. Kondakov, R. Young, K. Klubek, L-S. Liao
Eastman Kodak Co., Rochester, NY, U.S.A.

C. Brown
Plextronics, Inc., Pittsburgh, PA, U.S.A.

Aggregating polycyclic aromatic hydrocarbons (PAHs) of perylene class are useful as light-emitting-layer (LEL) additives. PAHs improve the device-operating half-life up to 1,000,000 hours at 1540 cd/m^2. Three factors in increasing the lifetime are light emission by PAHs, materials aggregation, and an expansion of the recombination and/or emission zones.

30.3: **PIN OLEDs: Improved Structures and Materials to Enhance Device Lifetime and Ease Mass Production** **(4:10)**

J. Birnstock, T. Canzler, M. Hofmann, A. Lux, S. Murano, P. Wellmann, A. Werner
Novaled AG, Dresden, Germany

PIN OLEDs are widely seen as a way to maximum power efficiency. For an efficient deep-red PIN OLED, a half-life of one million hours for a starting luminance of 500 cd/m^2 and a minimal voltage will be reported. Additional topics that impact the production yield and cost will be discussed.

30.4: **Deep-Blue OLEDs with Exceptional Device Lifetime** **(4:30)**

T. Royster, M. Ricks, M. Helber
Eastman Kodak Co., Rochester, NY, U.S.A.

A novel class of group 13 electron-transporting materials was used to advance the power efficiency and lifetime of blue and deep-blue OLED devices. Exceptional lifetime improvements have been achieved for deep-blue OLEDs. In addition to device data, key properties of the novel transporting materials will be presented.

BREAK **(4:50–5:10)**

AUTHOR INTERVIEWS **(6:30–7:30)**