OLED LIFETIME II

Wednesday, May 23 / 5:10 – 6:30 pm / Ballroom B

Chair:
Amal Ghosh, *eMagin Corp., Hopewell Junction, NY, U.S.A.*

Co-Chair:
Steven Van Slyke, *Eastman Kodak Co., Rochester, NY, U.S.A.*

36.1: ***Invited Paper:*** **Second-Generation Organics: High-Power-Efficiency, Ultra-Long-Life, and Low-Cost OLED Devices** **(5:10)**

K. Fehse, Q. Huang, K. Leo, R. Meerheim, G. Schwartz, K. Walzer
Technische Universitaet Dresden, Dresden, Germany

First-Generation OLEDs employed bottom-emitting structures with limited efficiency and comparably higher voltages. A number of novel approaches which allow for the realization of high-efficiency OLEDs with flexible configurations on low-cost substrates were demonstrated. Electrically doped transport layers play a key role in achieving these favorable properties.

36.2: **High-Performing Organic Electron-Injecting and Transporting Layers for Red, Green, Blue, and White OLED Devices** **(5:30)**

W. Begley, T. Hatwar, Eastman Kodak Co., Rochester, NY, U.S.A.

A new electron-injecting material (EIM) in combination with a new electron-transporting layer (ETL) that can be universally incorporated into red, green, blue (RGB), and white OLED devices that give superior performance for each device type has been demonstrated. Compared to the controls, no adverse effects on color or stability were observed.

36.3: **Improving the Operating Lifetime of Blue OLEDs with Phenanthroline-Based Electron-Transport Materials** **(5:50)**

K. Klubek, D. Kondakov
Eastman Kodak Co., Rochester, NY, U.S.A.

New phenanthroline-based electron-transport materials that greatly improve the stability of blue OLEDs relative to 4,7-diphenyl-1,10-phenanthroline (Bphen) was reported. Use of these new materials results in efficient electron injection and electron transport, allowing for low-voltage devices. Excellent device performance was also observed for red- and green-emitting OLEDs.

36.4: **Towards Stable Deep-Blue Phosphorescent OLEDs** **(6:10)**

I. Münster, K. Kahle, C. Lennartz, O. Molt, J. Rudolph, G. Wagenblast
BASF AG, Ludwigshafen, Germany

Cyclometallated iridium N-heterocyclic carbene (NHC)-complexes are efficient deep-blue triplet emitters used in OLEDs. The stability of carbene-type blue emitters and transport materials of the corresponding OLED stacks towards positive and negative charges, photochemical stability, improved device setups, and improved lifetimes for carbene-based deep-blue OLEDs will be presented.

AUTHOR INTERVIEWS **(6:30–7:30)**