OLED for display and lighting applications: current issues and future directions

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Abstract

Organic Electronics have received a lot of attention during the last years and advancements are leading to commercial products. Organic Light-Emitting Diodes (OLEDs) have already entered the mass production market in small size displays (smart phones, ...) or larger area display devices for OLEDtelevisions. However, the request in the market continues to grow for low-power, low-cost and flexible devices. OLEDs have also shown a great potential for lighting applications and worldwide research is ongoing to create high-brightness, high efficiency and long life white OLEDs for lighting. This presentation will give an introduction to OLED operation mechanisms and review recent insights into OLEDs materials, device structures and manufacturing processes. Some recent results from our group on the use of new host materials and TADF emitters will be presented.

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