Flexible Organic Light Emitting Diodes

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Abstract

Organic light-emitting diodes (OLEDs) with excellent performance have been reported. However, such devices are typically deposited on glass substrates because of structural or processing constraints. The use of thin flexible substrates in OLEDs allows lightweight, mechanically flexible, unbreakable devices but the flexibility of the substrate adds much difficulty to the fabrication technique. Since the first report of flexible OLEDs, performance improvements of them are slower, and fewer researchers are involved in compared with that of glass-based devices. An OLED based on the poly[2-methoxy-5-(2'-ethyl-hexyloxy)-1,4-phenylene vinylene] MEH-PPV emissive layer was fabricated on the ITO coated polyster(PET) substrate. We will present process development to make flexible devices and the device characteristics will be compared with OLED fabricated on an ITO-coated glass substrate.