

### Fully vacuum-free processable polymer organic light-emitting diodes by using metal transfer

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Polymer organic light-emitting diodes (OLEDs) have been prepared by a series of vacuum-free fabrication processes. A hole injection layer and an active polymer emissive layer have been composited successively on the ITO substrates. In order to complete the vacuum-free fabrication of polymer OLEDs, a metal cathode layer has been transferred onto the surface of the active polymer emissive layer using a separately prepared metal transfer film. The OLED device structure fabricated in this study is ITO/PEDOT:PSS/PVK-based phosphorescent emissive layer/Al and the devices are fabricated by all the vacuum-free fabrication processes such as screen printing, Spin coating and metal transfer. And in order to obtain high brightness from the fabricated devices, we shows several methods for overcome thin layer  $Al_2O_3$  layer problem located between Al and Organic layer.