SP7.03 Color Tunable Multiphoton OLEDs

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Multiphoton Emission OLEDs (MPE-OLEDs) generally show specific emission characteristics. This is due to the optical interference in the thick device structure, that is, the alternately stacked emissive units and charge generation layers. The emission characteristics can be controlled by tuning the device parameters such as layer thickness and number of the emissive units. Here, we demonstrate the minimization of the viewing angle dependence of the emission spectra by using a transparent cathode and by introducing an interference reduction spacer into the MPE-OLED. Additionally, we realize the color tunable MPE-OLED by adding an extra emissive unit via the interference reduction spacer. This structure is suitable to the white OLED with good color rendition index (CRI).