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Abstract
In recent years, Flat Panel Display has become the trunk stream of the optical and electronic industry markets. However, Organic light-emitting diode (OLED) is the present extremely popular topic. It is biggest with the liquid-crystal display (LCD) differently lies in which self emitting. Therefore, it does not need the back lighting. Moreover it emits light of the scope to be quite broad. Simultaneously, the organic electroluminescent part most important goal is its application in "the full color" on the plane display. Therefore has the high efficiency and the good light color red, green, the blue (R、G、B) three of fundamental colors devices are the nowadays whole world all studies OLED to produce the goal which the official educational world joint effort. In addition, compared with other developed displays, OLED has some advantages, such as high power efficiency, high brightness, fast response time, and full viewing angle. Besides, it is light, thin and having a big size of dimension. Because of these advantages, organic light-emitting displays will replace those Flat Panel Displays, and become more popular tendency.

Organic Electroluminescence devices embrace organic light emitting diodes (OLEDs) and polymer light emitting diodes (PLEDs). PLED is made by spin coating or ink-jet printing under the environment of the atmosphere. And OLED is made by thermal evaporation under the environment of the vacuum. Therefore, the equipment cost of PLED is lower than OLED. However, the great superiority of PLED is its solution system, therefore the choice of the solvent is very importance. In this thesis, effects of single solvent and binary solvent mixtures for electroluminescent diodes were discussed. We have been investigated the electric, physic and optical properties of the PLEDs.

In order to make white PLED, we using the radiating way of Host-Guest system. The host material PVK of high energy doped with blue and orange materials, utilizing energy transfer to reach white light. And then we are able to analyze the completing brightness, operating voltage, operating electric current, and outer quantum.
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