

Materials List for:

Blue-hazard-free Candlelight OLED

Jwo-Huei Jou¹, Meenu Singh¹, Yu-Ting Su¹, Shih-Hao Liu¹, Zhe-Kai He¹

¹Department of Materials Science and Engineering, National Tsing Hua University

Correspondence to: Jwo-Huei Jou at jjou@mx.nthu.edu.tw

URL: <https://www.jove.com/video/54644>

DOI: [doi:10.3791/54644](https://doi.org/10.3791/54644)

Materials

Name	Company	Catalog Number	Comments
ITO glass	Lumtech		84% transparency
poly(3,4-ethylenedioxythiophene) - poly(styrenesulfonate) (PEDOT/PSS)	UniRegion Bio-Tech		Stored at 4 °C, HOMO (eV) = -4.9, LUMO (eV) = -3.3
4,4,4-tris(N-carbazolyl)triphenylamine (TCTA)	E-Ray Optoelectronics Technology co., Ltd		Non-toxic, HOMO (eV) = -5.7, LUMO (eV) = -2.3
tris(2-phenyl-pyridine) (Ir(ppy) ₃)	E-Ray Optoelectronics Technology co., Ltd		Non-toxic, HOMO (eV) = -5.6, LUMO (eV) = -3.9
1,3,5-tris(N-phenylbenzimidazol-2-yl)benzene (TPBi)	Luminescence Technology corp.		Non-toxic, HOMO (eV) = -6.2, LUMO (eV) = -2.7
iridium(III) bis(4-phenylthieno[3,2-c]pyridinato-N,C 2')acetylacetonate (PO-01)	Luminescence Technology corp.		Non-toxic, HOMO (eV) = -5.1, LUMO (eV) = -2.7
tris(2-phenylquinoline)iridium(III) (Ir(2-phq) ₃)	E-Ray Optoelectronics		Non-toxic, HOMO (eV) = -5.1, LUMO (eV) = -2.8
LiF	Echo chemicals		99.98%
Aluminium ingot (Al)	Guv team International pvt. ltd		100.00%
Acetone	Echo chemicals		99.90%
2-Propanol	Echo chemicals		99.90%
Hole-injection material, WHI-001	WAN HSIANG precision machinery co., Ltd		non-toxic, HOMO (eV) = -9.8, LUMO (eV) = -5.6
Hole-transport material, WHI-215	WAN HSIANG precision machinery co., Ltd		non-toxic, HOMO (eV) = -5.4, LUMO (eV) = -2.5
host material, WPH-401	WAN HSIANG precision machinery co., Ltd		non-toxic, HOMO (eV) = -5.8, LUMO (eV) = -2.7
Electron-injection material, WIT-651	WAN HSIANG precision machinery co., Ltd		non-toxic, HOMO (eV) = -5.8, LUMO (eV) = -3.1
Electron-transport material, WET-603	WAN HSIANG precision machinery co., Ltd		non-toxic, HOMO (eV) = -5.9, LUMO (eV) = -2.6
Green dye, WPGD-832	WAN HSIANG precision machinery co., Ltd		non-toxic, HOMO (eV) = -5.8, LUMO (eV) = -3.1
Deep-red dye, PER 53	E-Ray Optoelectronics Technology co., Ltd		non toxic, HOMO (eV) = -5.1, LUMO (eV) = -2.4