

Fig. SI 1 (a) Cyclic Voltammetry (CV) diagram of orange dopant in dichloromethane. CV of N,N'-diphenyl-N,N'-bis(1,1'-biphenyl)-4,4'-diamine (NPB) is also shown for the calibration. (b) Absorption spectrum of the orange dopant.

## References

1. HOMO level of NPB (5.4 eV) was also directly measured by CV method with ferrocene as a reference.
2. J.-W. Kang *et al.*, *Org. Electron.*, 2008, **8**, 452.
3. Y. Tao *et al.*, *Angew. Chem. Int. Ed.*, 2008, **47**, 8104.

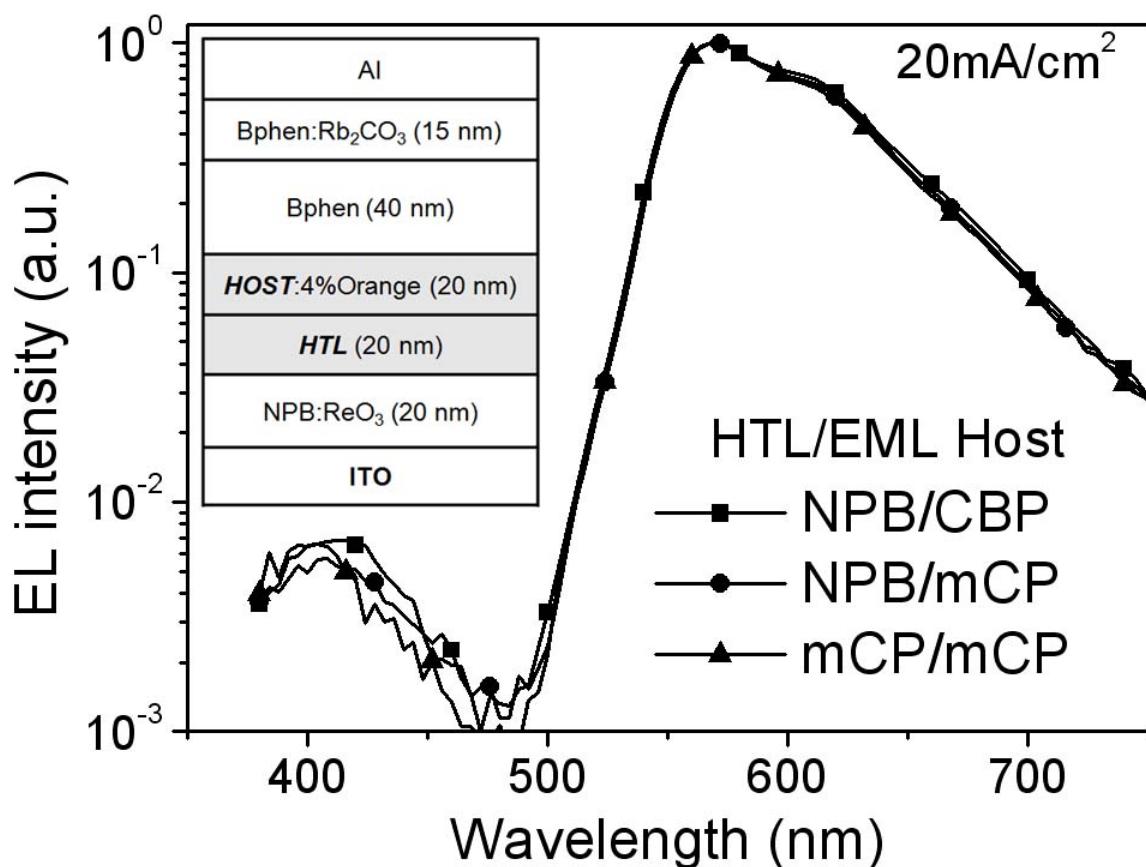


Fig. SI 2 Normalized EL spectra of the orange devices with different HTL and EML host. Inset shows the detailed device structures.

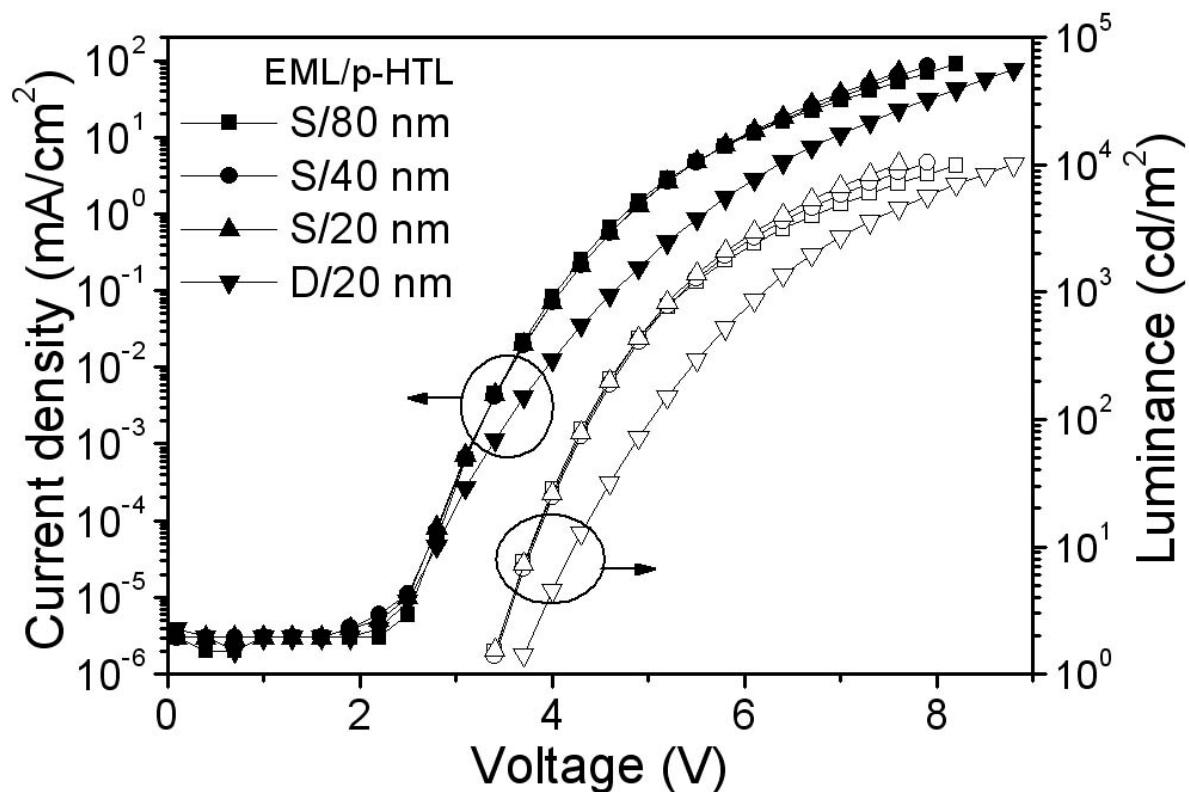


Fig. SI 3 The current density-voltage-luminance characteristics of the orange OLEDs by changing the thickness of p-HTL and EML structures.

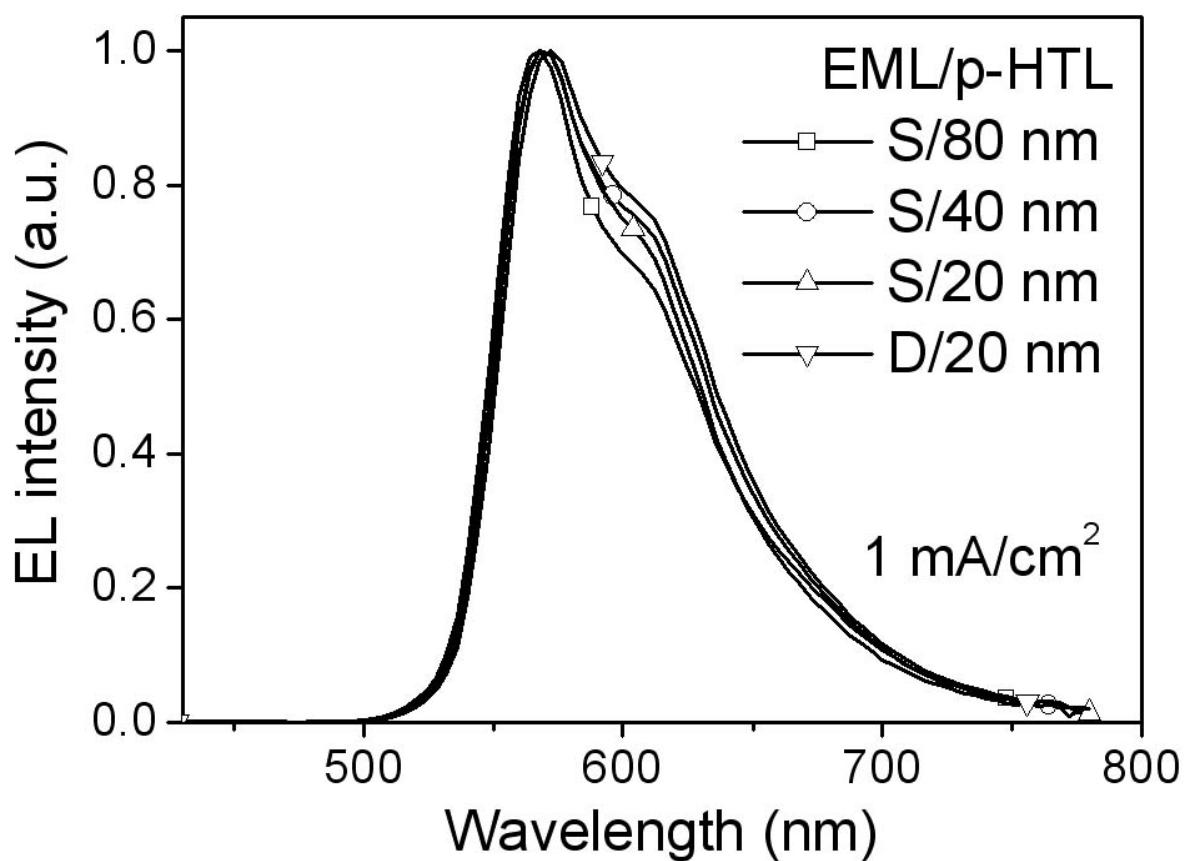


Fig. SI 4 Normalized EL spectra of the orange devices with different p-HTL thicknesses and EML structures.