

Electronic Supplementary Information (ESI)

Improved luminance and external quantum efficiency of red and white organic light-emitting diodes with iridium(III) complexes with phenyl-substituted 2-phenylpyridine as a second cyclometalated ligand

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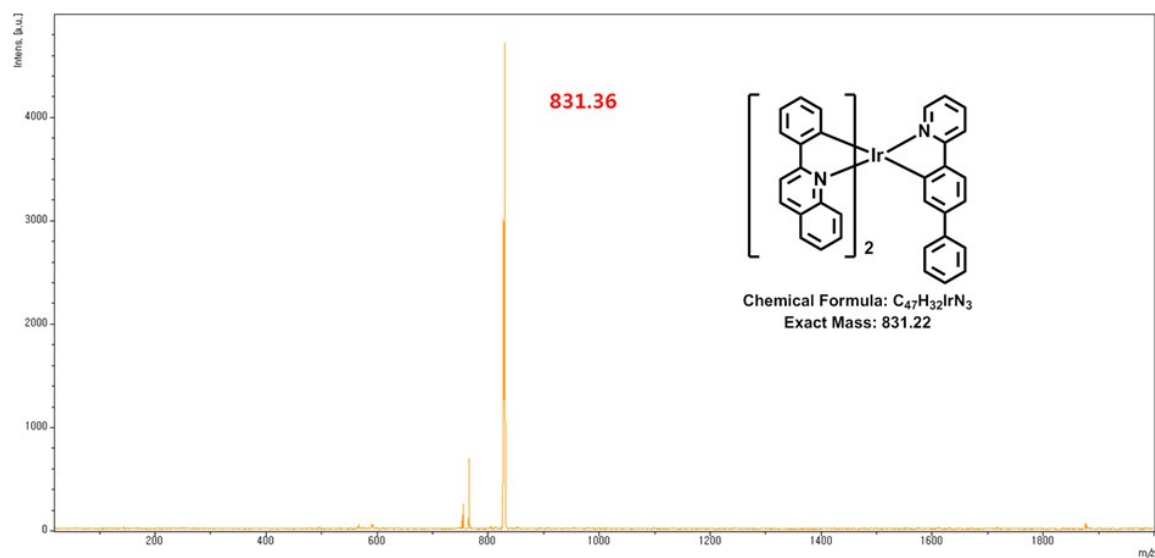
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Fig. S1 MALDI-TOF mass spectra of (PQ)₂Ir(Pppy) and (DMPQ)₂Ir(Pppy).

(a)



(b)

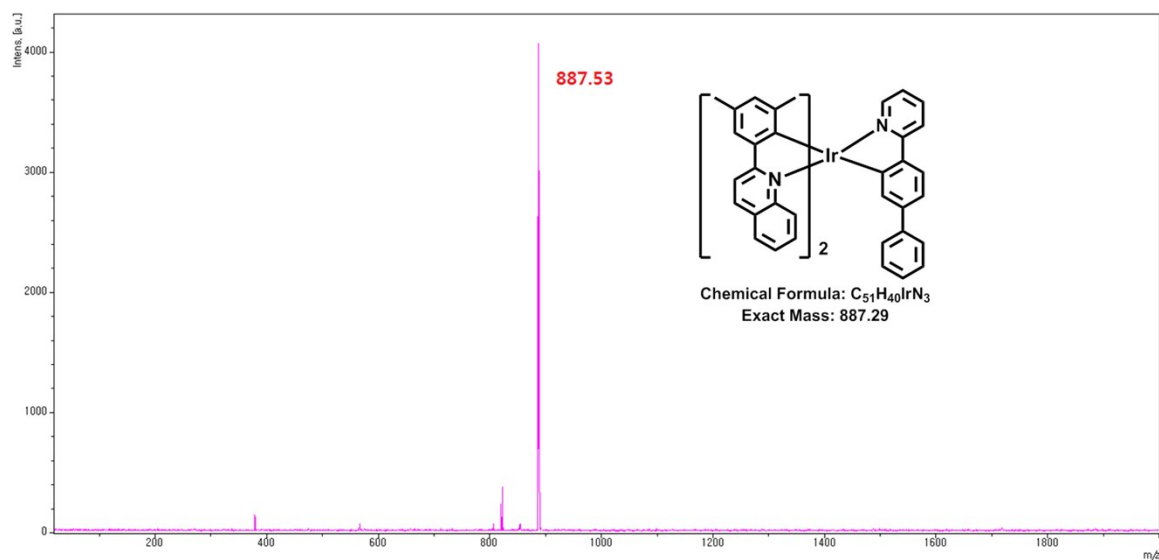


Fig. S2 High-performance liquid chromatography (HPLC) spectra of (a) $(PQ)_2Ir(Pppy)$ and (b) $(DMPQ)_2Ir(Pppy)$.

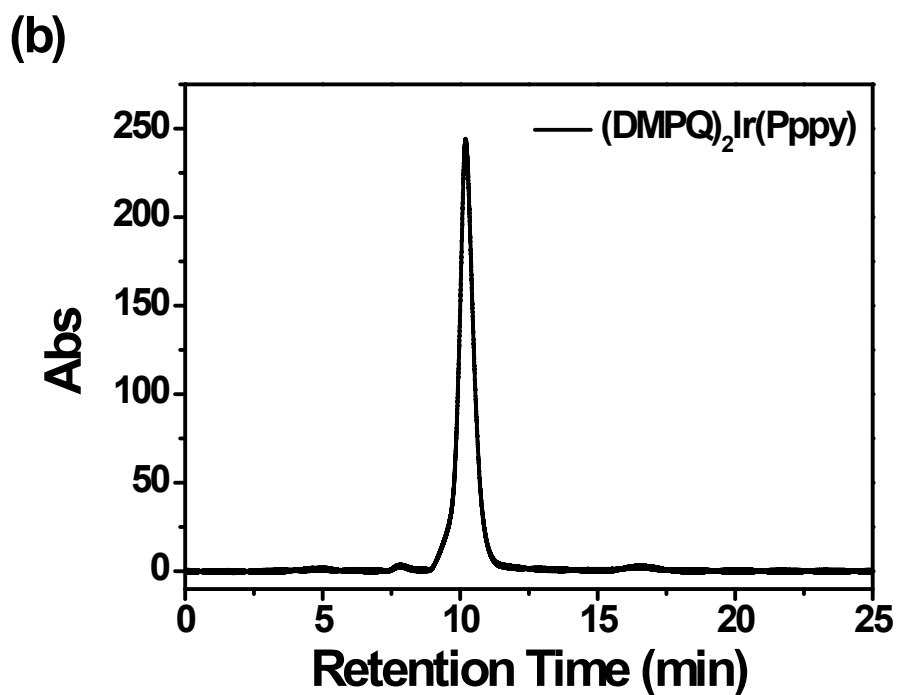
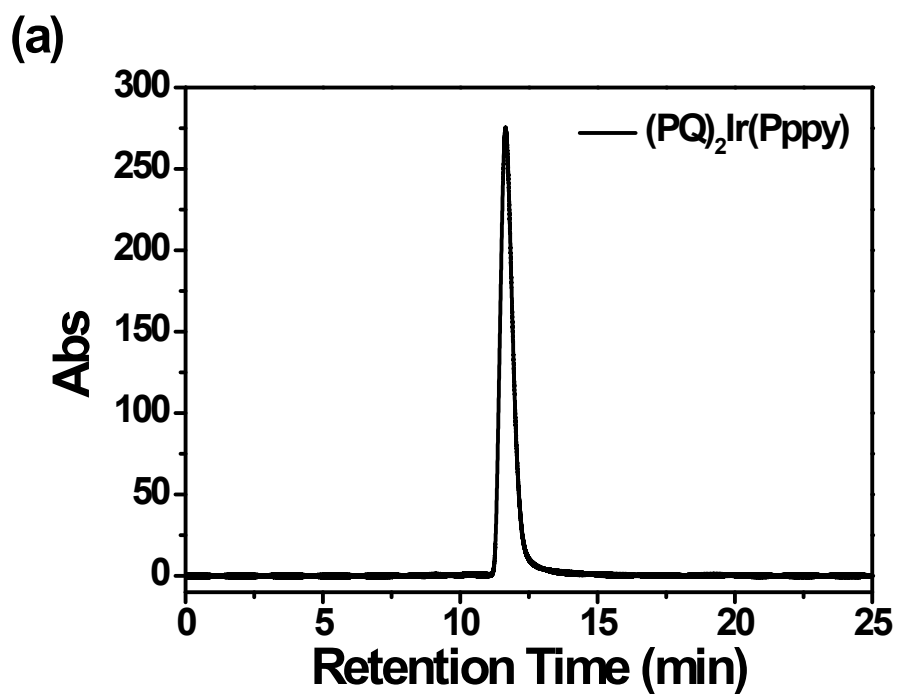


Fig. S3 PL spectra of (a) $(PQ)_2Ir(Pppy)$ and (b) $(DMPQ)_2Ir(Pppy)$ in dichloromethane solution and neat film state.

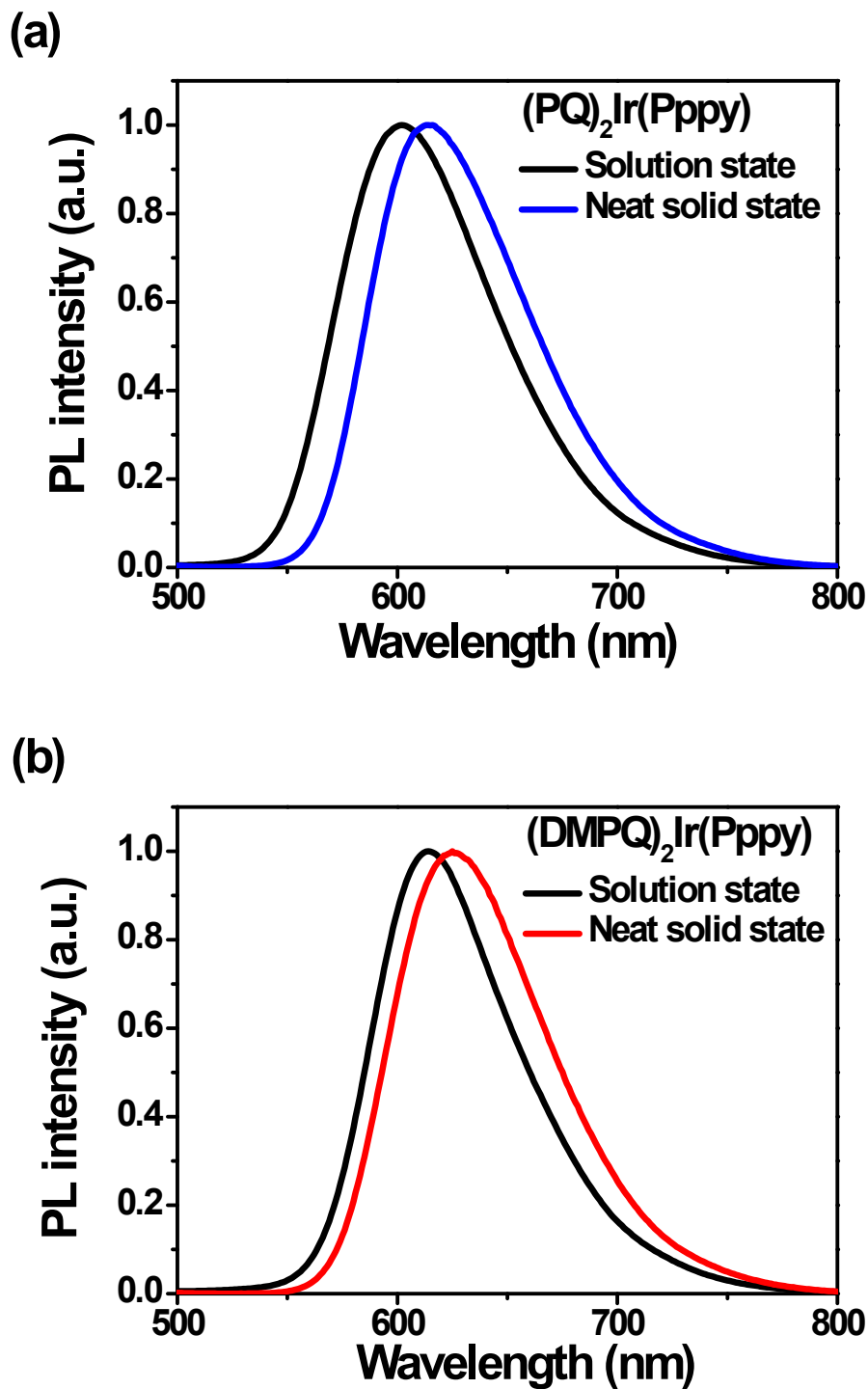


Fig. S4 HOMO and LUMO of Pppy calculated using DFT at B3LYP/6-31G(d) level.

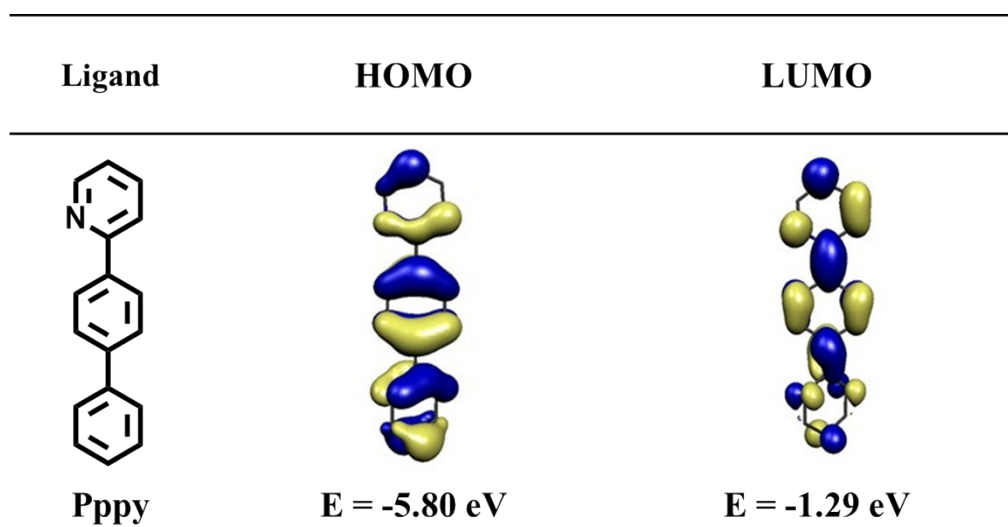


Fig. S5 Cyclic voltammograms of $(PQ)_2Ir(Pppy)$ and $(DMPQ)_2Ir(Pppy)$.

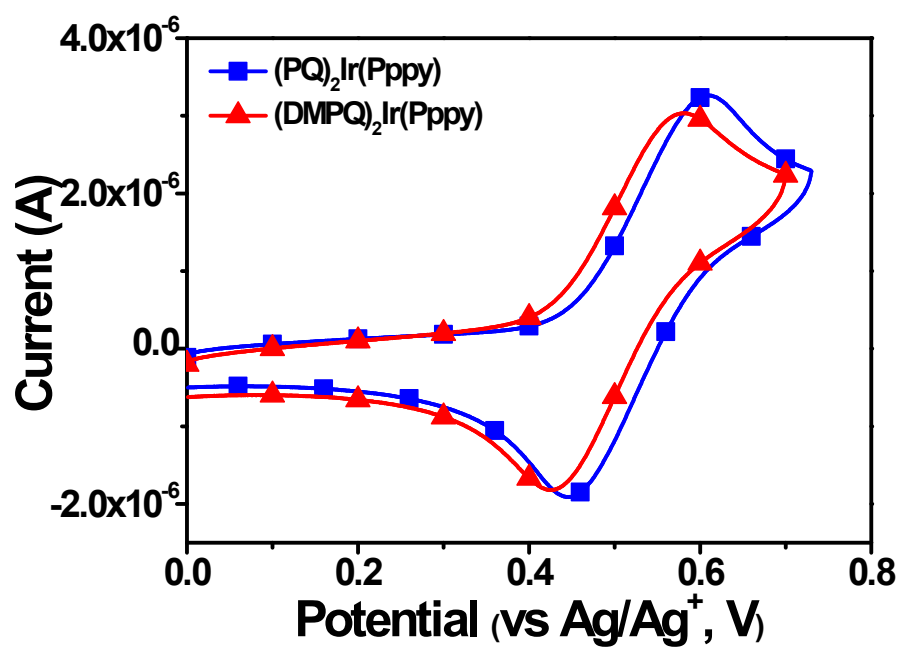


Fig. S6 Current density-voltage-luminance (*I-V-L*) of (a) $(PQ)_2Ir(Pppy)$ and (b) $(DMPQ)_2Ir(Pppy)$ devices with different doping concentrations.

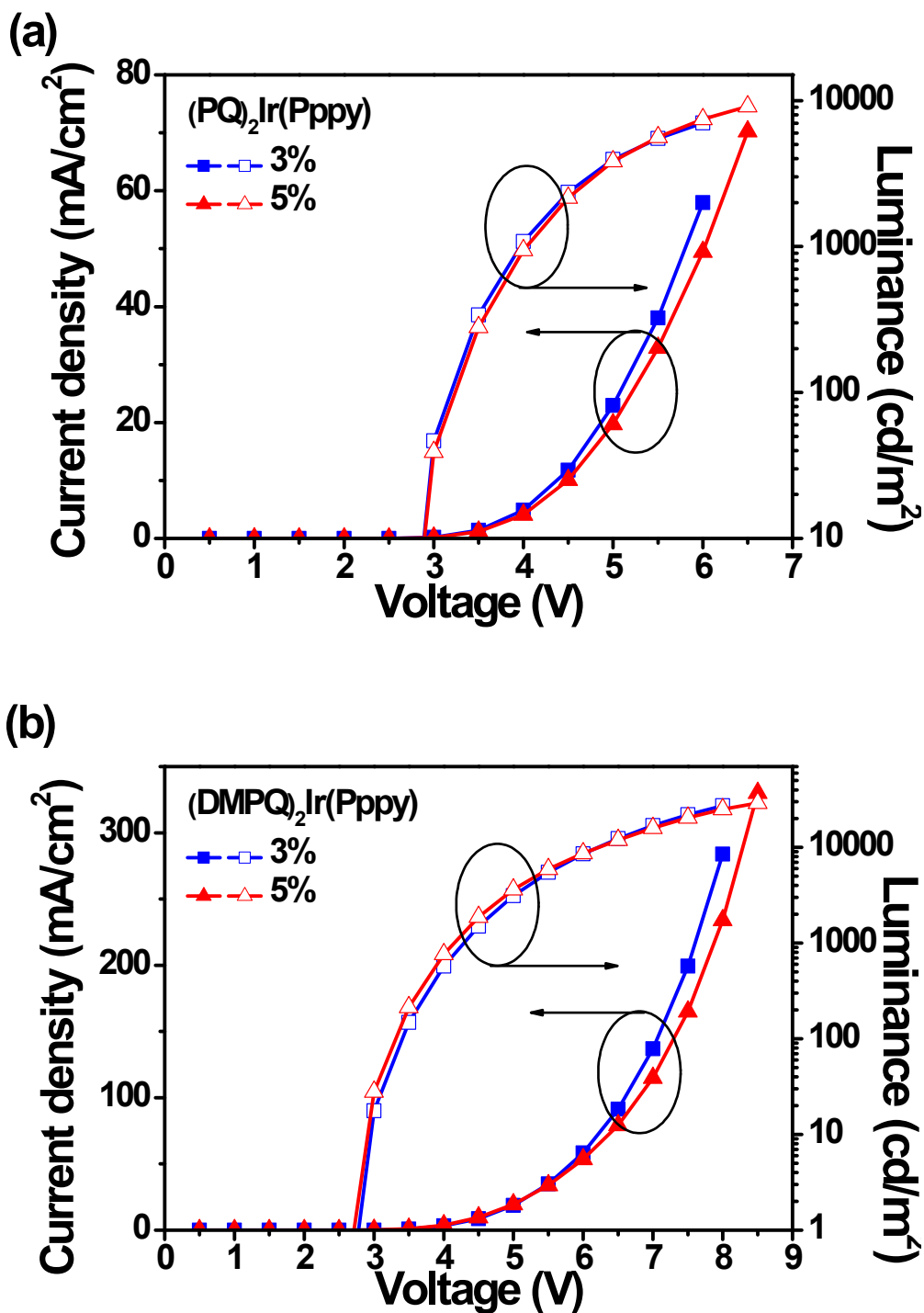


Fig. S7 External quantum efficiency-current density-luminous efficiency curves (EQE-*I*-LE) of (a) (PQ)₂Ir(Pppy) and (b) (DMPQ)₂Ir(Pppy) devices with different doping concentrations.

