Distinct phosphorescence enhancement of red-emitting iridium(III) complexes with formyl-functionalized phenylpyridine ligands

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Figure S1. $^1$H NMR of Ir-CHO.

Figure S2. $^{13}$C NMR of Ir-CHO.
Figure S3. MALDI-TOF mass spectra of Ir-CHO.

Figure S4. $^1$H NMR of Ir-OH.
Figure S5. $^{13}$C NMR of Ir-OH.

Figure S6. MALDI-TOF mass spectra of Ir-OH.
Figure S7. $^1$H NMR of Ir-PQCz.

Figure S8. $^{13}$C NMR of Ir-PQCz.
Figure S9. MALDI-TOF mass spectra of Ir-PQCz.

Figure S10. DSC traces of the Ir(III) complexes measured at a scan rate of 10 °C/min under N₂.
Figure S11. WAXD patterns (15-60°) of the Ir(III) complexes.

Figure S12. The PL transients of the Ir(III) complexes in N$_2$-degassed CH$_2$Cl$_2$ at 298 K with 400 nm excitation.
Figure S13. Cyclic voltammograms of the Ir(III) complexes in 0.1 M tetra-n-butylammonium hexafluorophosphate (Bu_4NPF_6) with a scanning rate of 50 mV/s.

Figure S14. EL spectra of OLEDs with increasing the operating voltage from 7 V to 16 V.
Figure S15. EL spectra of WOLEDs with increasing the operating voltage from 6 V to 13 V.