

Supporting Information

Optimizing Spatial Effect in Quaternary Phosphine Oxide Host Materials for High-Efficiency Blue Organic Light-Emitting Diodes

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Thermal Properties of 9CzFxPO

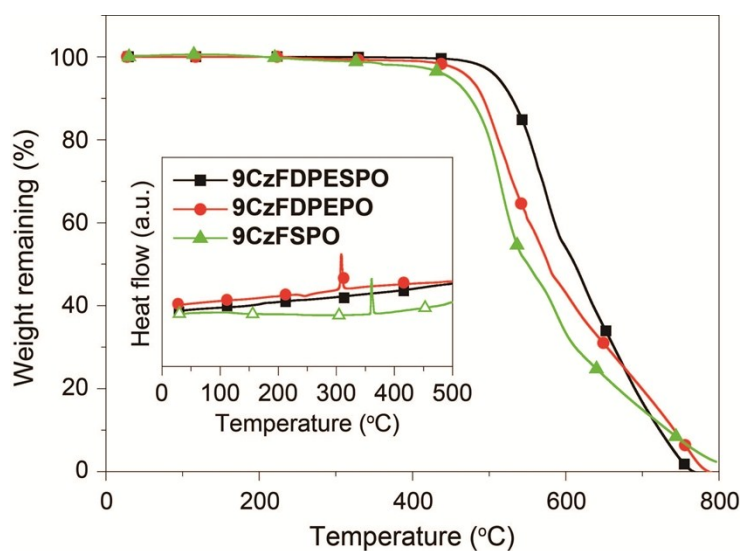


Figure S1. TGA and DSC (inset) curves of 9CzFxPO.

Solid-State Optical Properties of 9CzFxPO

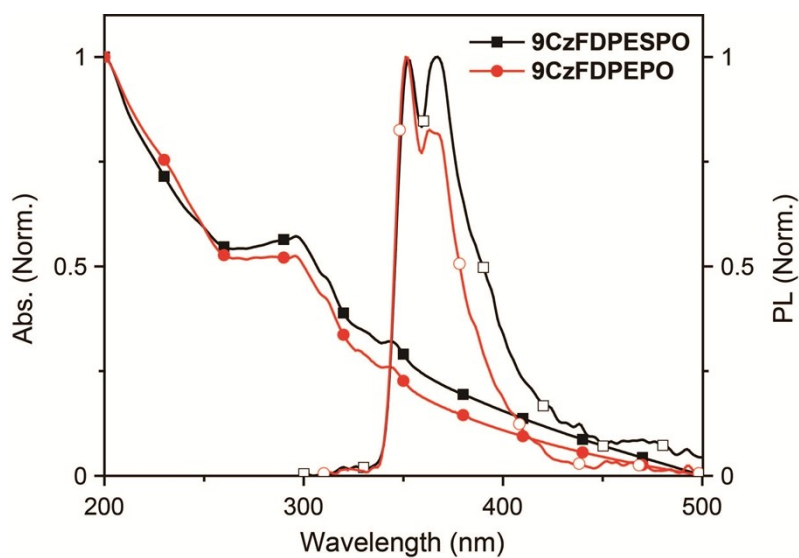


Figure S2. Absorption and emission curves of **9CzFxPO** in thin films.

Volt-Ampere Characteristics of Light-Emitting Diodes

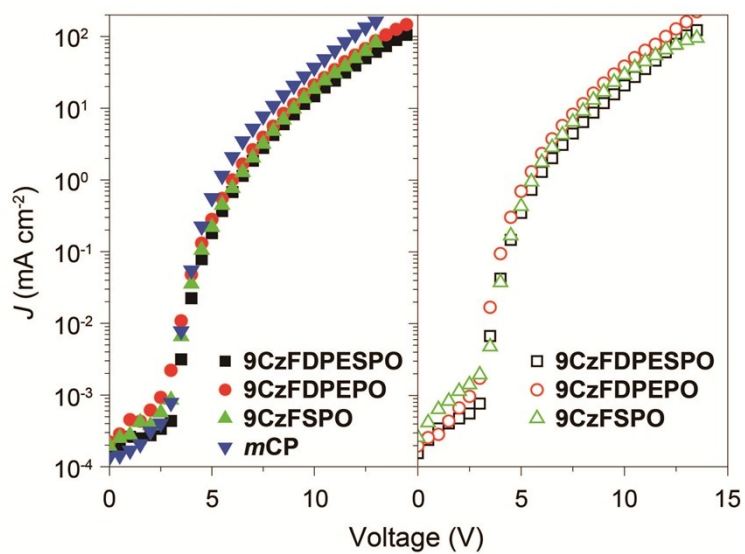


Figure S3. I - V characteristics of 9CzFxPO based blue phosphorescence (solid symbol) and TADF light-emitting diodes (hollow symbol).

Doping Concentration Dependence of EL Performance for Blue PHOLEDs

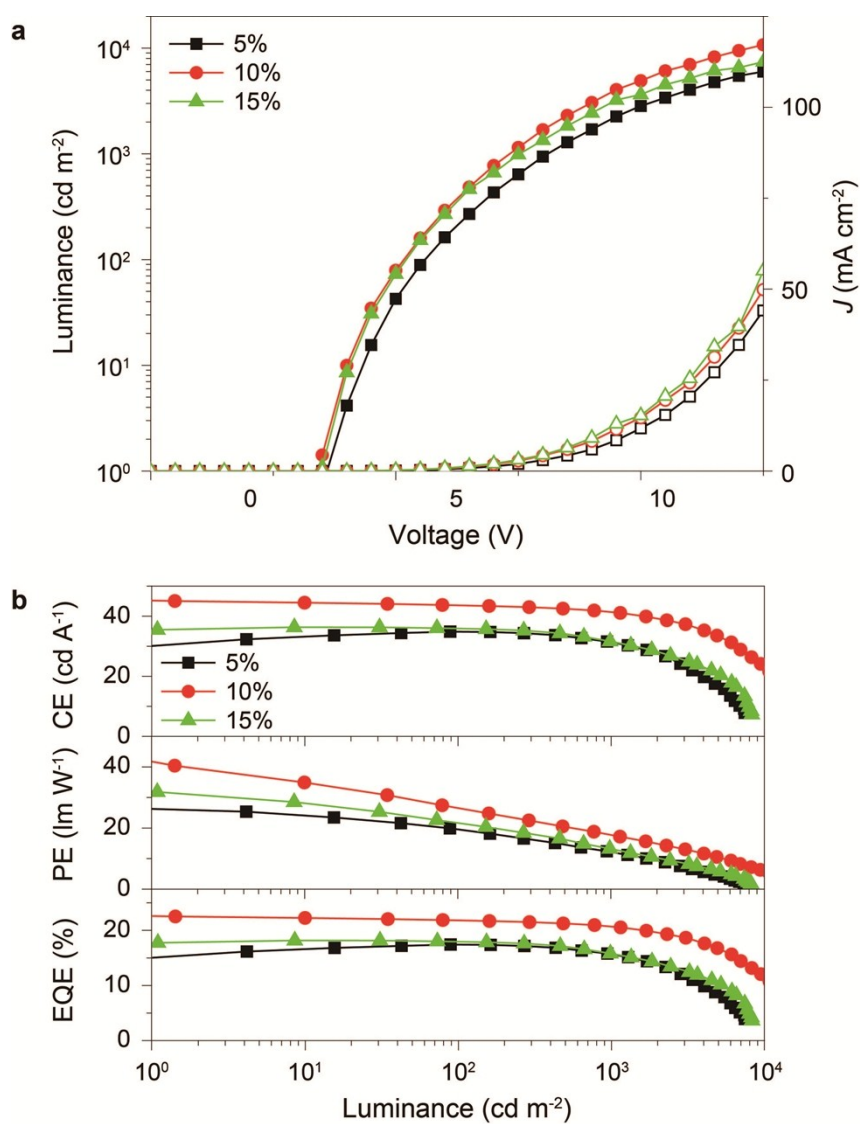


Figure S4. (a) Brightness- J - V curves of 9CzFDPESPO based blue PHOLEDs with various doping concentrations; (b) the dependence of device efficiencies on doping concentration for blue PHOLEDs.

Doping Concentration Dependence of EL Performance for Blue TADF OLEDs

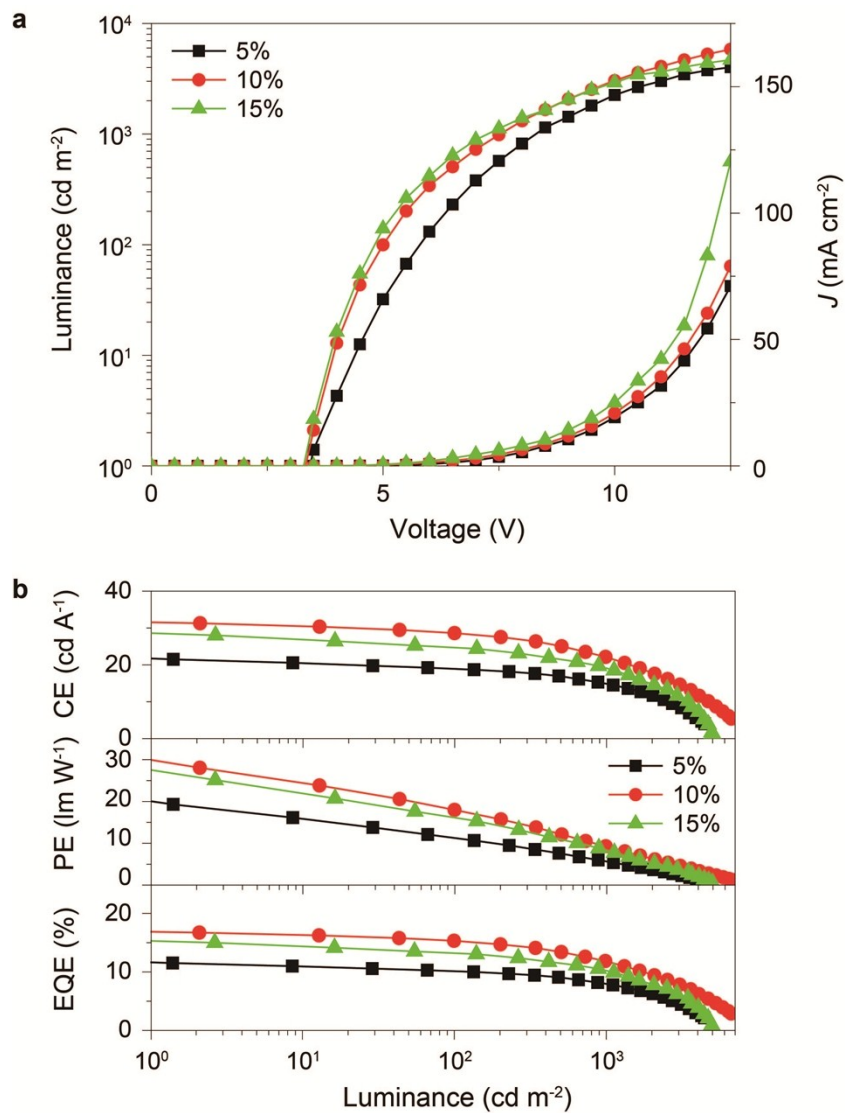


Figure S5. (a) Brightness- J - V curves of 9CzFDPEsPO based blue TADF OLEDs with various doping concentrations; (b) the dependence of device efficiencies on doping concentration for blue TADF OLEDs.