Supplementary information for

Synthesis and Properties of n-Type Triphenylpyridine Derivatives and Applications in Deep-Blue Organic Light-emitting Devices as Electron-Transporting Layer

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DPTNT

Mobility (cm$^2$ V$^{-1}$ s$^{-1}$) vs. $E^{1/2}$ (V$^{1/2}$ cm$^{-1/2}$)

p-PPtNT

Mobility (cm$^2$ V$^{-1}$ s$^{-1}$) vs. $E^{1/2}$ (V$^{1/2}$ cm$^{-1/2}$)

m-PPtNT

Mobility (cm$^2$ V$^{-1}$ s$^{-1}$) vs. $E^{1/2}$ (V$^{1/2}$ cm$^{-1/2}$)
m-PmPNT

**Mobility (cm$^2$V$^{-1}$s$^{-1}$)** vs. $E^{1/2}$ (V$^{1/2}$cm$^{-1/2}$)

CPPNN

**Mobility (cm$^2$V$^{-1}$s$^{-1}$)** vs. $E^{1/2}$ (V$^{1/2}$cm$^{-1/2}$)

p-PPtNN

**Mobility (cm$^2$V$^{-1}$s$^{-1}$)** vs. $E^{1/2}$ (V$^{1/2}$cm$^{-1/2}$)
Figure S1. Electron mobilities measured by transient electroluminescence (EL) method.
Table S1. Absorption and fluorescence emission spectral data of the two groups of triphenylpyridine derivatives in different solvents at room temperature.

<table>
<thead>
<tr>
<th>Compound</th>
<th>c-C₆H₁₂[^a]</th>
<th>CH₂Cl₂</th>
<th>THF[^b]</th>
<th>CH₃CN</th>
<th>CH₃OH</th>
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<td><strong>DPTNT</strong> [M]=1×10⁻⁵ mol L⁻¹</td>
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<td>$\lambda_{ab}^{\max}$/nm</td>
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<td>269/318</td>
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<td>32900/</td>
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<td>60000/</td>
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</table>

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**Figure S2.** Absorption and fluorescent emission spectra of the two groups of triphenylpyridine derivatives in different solvents at room temperature.
Scheme S1. The molecular structures of the corresponding intermediate products for the two groups of triphenylpyridine derivatives.