

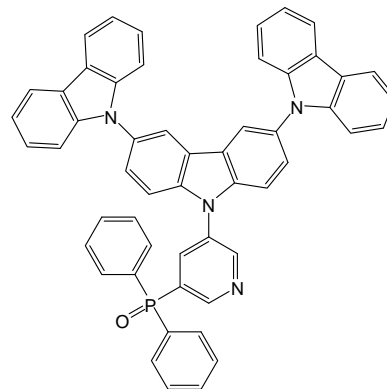


## Modulation of n-Type Units in Bipolar Host Materials toward High-Performance PhOLEDs

### Product Specifications

#### LT-N4159 m-POPpyCz

<b>Name.</b>	(5-(9'-H-[9,3':6',9''-tercarbazol]-9'-yl)pyridin-3-yl)diphenylphosphine oxide
<b>CAS No.</b>	2151067-61-5
<b>Grade</b>	Sublimed, >99 % (HPLC)
<b>Formula</b>	C <sub>53</sub> H <sub>35</sub> N <sub>4</sub> OP
<b>Molecular Weight</b>	774.84 g/mole
<b>Absorption</b>	296,326,343 (film)
<b>Emission</b>	423 nm (film)
<b>HOMO/LUMO</b>	-5.63 eV/ -2.54 eV



\* Reference: ACS Appl. Mater. Interfaces **2017**, 9, 37888–37897

### Features

- The m-POPpyCz containing a bulky DPPD as the second n-type unit with a metalinking possesses the best charge-balancing state and generates a maximum external quantum efficiency (EQE) of 27.0% in its sky-blue device and still remained at a high EQE of 23.6% even at the practical brightness of 1000 cd/m.

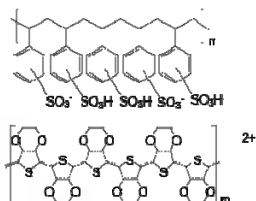
### Device Application

#### The Blue PhOLEDs Device:

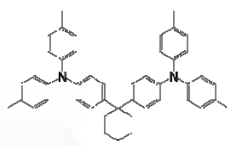
ITO/ PEDOT:PSS (40 nm)/ TAPC (20 nm)/ m-POPpyCz: (6 wt%) FlrPic (20 nm)/ TmPyPB (40 nm)/ LiF (1 nm)/ Al (200 nm)

#### The Green PhOLEDs Device:

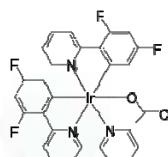
ITO/ PEDOT:PSS (40 nm)/ TAPC (20 nm)/ m-POPpyCz: (8 wt%) Ir(ppy)<sub>3</sub> (20 nm)/ TmPyPB (40 nm)/ LiF (1 nm)/ Al (200 nm)



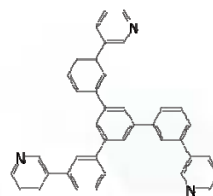
LT-PS001 PEDOT:PSS



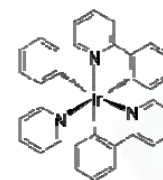
LT-N137 TAPC  
LiF = LT-E001



LT-E607 FlrPic  
Al = LT-E005



LT-N863 TmPyPB



LT-E504 fac-Ir(ppy)<sub>3</sub>

Materials are used by qualified for testing and research only, there are not guaranteed in patent contention by customer use.

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