

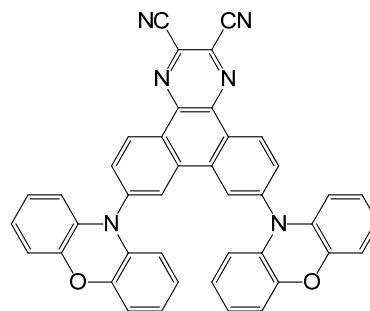


Realizing Efficient Red Thermally Activated Delayed Fluorescence Organic Light-Emitting Diodes Using Phenoxazine/Phenothiazine-Phenanthrene

Product Specifications

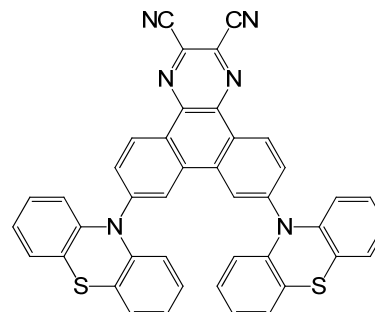
LT-N798 PXZ-DCPP

Name.	7,10-bis(phenoxazine)-2,3-dicyanopyrazino phenanthrene
CAS No.	1803288-00-7
Grade	Sublimed, >99 % (HPLC)
Formula	$C_{42}H_{22}N_6O_2$
Molecular Weight	642.66 g/mole
Absorption	323, 372 nm (in Toluene)
PL	533 nm (in Toluene)
HOMO/LUMO	-5.19 eV/ -3.52 eV
ΔE_{ST}	0.09 eV



LT-N799 PTZ-DCPP

Name.	7,10-bis(phenothiazine)-2,3-dicyanopyrazino phenanthrene
CAS No.	1803288-01-8
Grade	Sublimed, >99 % (HPLC)
Formula	$C_{42}H_{22}N_6S_2$
Molecular Weight	674.79 g/mole
Absorption	369, 436 nm (in Toluene)
PL	539 nm (in Toluene)
HOMO/LUMO	-5.08 eV/ -3.48 eV
ΔE_{ST}	0.18 eV



* Reference: *Organic Electronics* 59 (2018) 32–38

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



Features

- Summary of the EL performances of OLEDs based on PXZ-DCPP and PTZ-DCPP

Device	PE _{max} ^a (lm/w)	EQE _{max} ^b (%)	EQE ₁₀₀₀ ^c (%)	λ _{EL} ^d (nm)	CIE(x,y)
PXZ-DCPP	27.8	17.4	12.9	608	(0.56, 0.43)
PTZ-DCPP	8.1	12.3	6.1	640	(0.62, 0.36)

a) Maximum power efficiency.

b) Maximum external quantum efficiency.

c) EQE at 1000 cd/m².

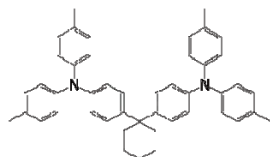
d) EL emission peak.

Device Application

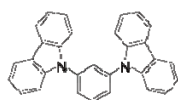
The OLEDs Device:

ITO/ MoO₃ (5 nm)/ TAPC (60 nm)/ MCP (10 nm)/ CBP:PXZ-DCPP (5 wt%, 20 nm)/ BPhen (50 nm)/ LiF (1 nm)/ Al (100 nm).

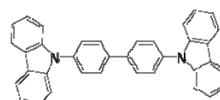
ITO/ MoO₃ (5 nm)/ TAPC (60 nm)/ MCP (10 nm)/ CBP:PTZ-DCPP (5 wt%, 20 nm)/ BPhen (50 nm)/ LiF (1 nm)/ Al (100 nm).



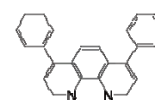
LT-N137 TAPC
LT-E003 MoO₃



LT-E107 MCP
LT-E001 LiF



LT-E409 CBP
LT-E005 Al



LT-E305 Bphen

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