

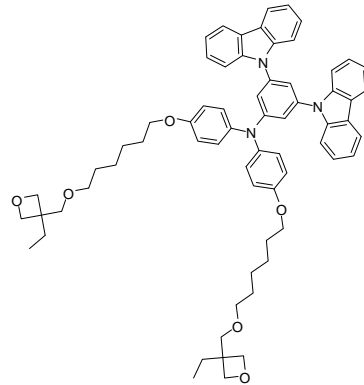


Solution-Processed TADF OLED with High EQE as 31% Using High Triplet Energy Crosslinkable Hole Transport Materials

Product Specifications

LT-N191 Oxe-DCDPA

Name.	3,5-di-9H-carbazol-9-yl-N,N-bis[4-[[6-[(3-ethyl-3-oxetanyl)methoxy]hexyl]oxy]phenyl]-benzenamine
CAS No.	2351818-31-8
Grade	Sublimed, >99 % (HPLC)
Formula	C ₆₆ H ₇₃ N ₃ O ₆
Molecular Weight	1004.30 g/mole
Absorption	293, 325, 340 nm (in THF 10 ⁻⁴ M)
PL	411 nm (in THF 10 ⁻⁴ M)
HOMO/LUMO	-5.80 eV/ -2.25 eV



* Reference: Adv. Funct. Mater. 2019, 29, 1901025

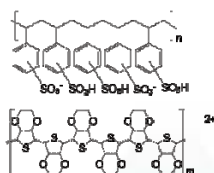
Features

- The highest external quantum efficiency (EQE) show 26.1% and 24.0%, luminous efficiency (η_L) show 94.8 cd/A and 74.0 cd/A are achieved for green emission (DACT-II as emitter) and bluish-green emission (DMAC-TRZ as emitter), respectively.
- Using double HTLs, composed of OTPD with high hole mobility and Oxe-DCDPA with high triplet energy, leads to the highest EQE 30.8% and 27.2%, η_L 111.9 cd/A and 83.8 cd/A for green emission and bluishgreen emission, respectively. These two devices show the high maximum brightness of 81 100 and 70 000 cd/m², respectively.

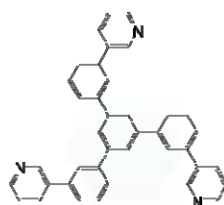
Device Application

The Green TADF Device:

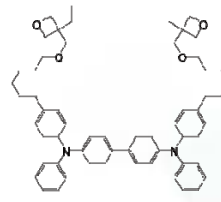
ITO/ PEDOT:PSS / OTPD or QUPD (10 nm)/ Oxe-DCDPA (10 nm)]/ DCzPPy:DACT-II (20 wt%, 35 nm)/ TmPyPB (55 nm)/ CsF (1.5 nm)/ Al.



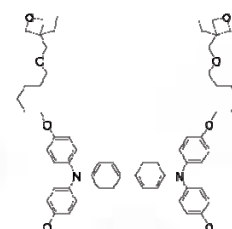
LT-PS001 PEDOT:PSS



LT-N863 TmPyPB
CsF = LT-E004



LT-N159 OTPD
Al = LT-E005



LT-N160 QUPD

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