

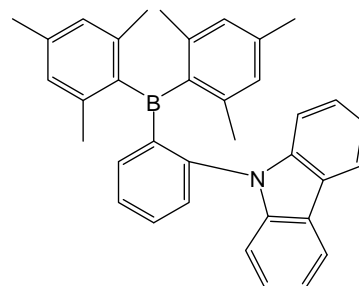


Rigidity-Induced Delayed Fluorescence by Ortho Donor-Appended Triarylboron Compounds: Record-High Efficiency in Pure Blue Fluorescent OLEDs

Product Specifications

LT-N6021 CzoB

| | |
|-------------------------|---|
| Name. | 9-[2-(Dimesitylboryl)phenyl]-9H-carbazole |
| CAS No. | 2102522-07-4 |
| Grade | Sublimed, >99 % (HPLC) |
| Formula | C ₃₆ H ₃₄ BN |
| Molecular Weight | 491.47 g/mole |
| Absorption | 324, 387 nm (in Toluene) |
| PL | 463 nm (in Toluene) |
| HOMO/LUMO | -5.55 eV/ -2.32 eV |
| ΔE_{ST} | 0.15 eV |



* Reference: ACS Appl. Mater. Interfaces **2017**, 9, 24035–24042

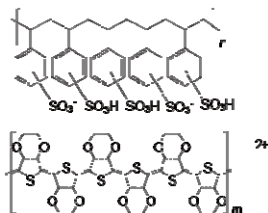
Features

- The pure blue OLEDs based on the proposed ortho D-A emitters with a carbazole donor (CzoB) show a record-high η_{EQE} of 22.6% with CIE color coordinates of (0.139, 0.150), well illustrating the validity of the proposed approach. Upon optical optimization, the η_{EQE} is further improved to 24.1%.

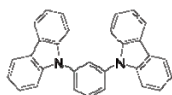
Device Application

The Blue TADF Device:

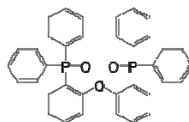
ITO (70 or 150 nm)/ PEDOT:PSS (40 nm)/ TAPC (20 nm)/ MCP (10 nm)/ DPEPO:CzoB (wt%, 25 nm)/ DPEPO (10 nm)/ TPBi (30 nm)/ LiF (1 nm)/ Al (100 nm).



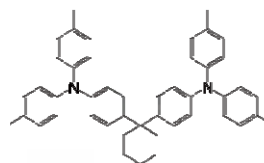
LT-PS001 PEDOT:PSS



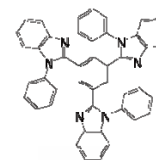
LT-E107 MCP
LiF = LT-E001



LT-N4060 DPEPO
Al = LT-E005



LT-N137 TAPC



LT-E302 TPBi

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

Head office: 31F-5, No. 99, Sec. 1, Xintai 5th Rd., Xizhi, New Taipei City 22175, Taiwan, R.O.C., TEL: +886-2-2697-5600, FAX: +886-2-2697-5601.

Factory I: 2F, No. 21, R&D Road II, Science-Based Industrial Park, Hsin-Chu 30076, Taiwan, R.O.C., TEL: +886-3-666-3188, FAX: +886-3-666-9288.

總公司: 22175 新北市汐止區新台五路一段 99 號 31 樓之 5, 電話: 02-2697-5600, 傳真: 02-2697-5601.

新竹廠: 30076 新竹科學工業園區研發二路 17 號 2 樓, 電話: 03-666-3188, 傳真: 03-666-9288.

E-mail: sales@lumtec.com.tw; Web: <http://www.lumtec.com.tw>