Technical Data Sheet

ACS Material LumioTech™ CbBPCb

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1. Overview

CbBPCb is mainly used as a host material in organic light-emitting diodes (OLEDs), phosphorescent host materials, semiconducting small molecules, and carboline derivatives.

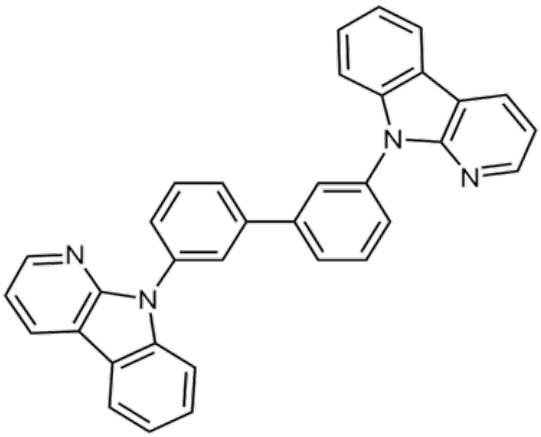
The realm of OLEDs is dynamic and continuously advancing. Among the diverse materials driving this innovation, CbBPCb has emerged as a noteworthy candidate within the OLED stack.

Bipolar charge transport properties of CbBPCb resulted in the color stability.

Universal exciplex hosts

2. Specifications

Product Name	CbBPCb
CAS no.	1469997-91-8
Chemical Formula:	C34H22N4
Full name:	3,3'-Di(9H-pyrido[2,3-b]-indol-9-yl)biphenyl
Molecular weight (g/mol):	486.57 g/mol
Purity:	Sublimed: >99.0%
Physical state:	Solid
Color:	Off-white
Absorption (nm):	λmax 240, 297 in THF
Emission (nm):	λmax 382in THF
HOMO/LUMO (eV):	HOMO = 6.3 / LUMO = 2.8
Melting Point (°C):	251 (Tg = 96)



Chemical Structure of 3,3'-Di(9H-pyrido[2,3-b]-indol-9-yl)biphenyl

3. Features

- **High Energy Transfer Efficiency:** A standout characteristic of CbBPCb is its exceptional energy transfer efficiency, a vital attribute for advancing OLED technology. Incorporating CbBPCb can enhance the quantum efficiency of blue phosphorescent OLEDs (PHOLEDs) to over 30%.

- **Host Material for Phosphorescent OLEDs (PHOLEDs):** CbBPCb's unique properties make it an excellent choice as a host material in PHOLEDs. This application promotes efficient operation and contributes to longer device lifetimes.

- **Improved OLED Performance:** CbBPCb, when paired with other materials, has been shown to enhance critical OLED performance metrics. These improvements include extending the device's operational life and reducing the driving voltage, ultimately fostering more energy-efficient OLED solutions.

4. Applications

- Bipolar phosphorescent host