

Supporting Information

Highly efficient solution processed organic light emitting diodes containing a new crosslinkable hole transport material blended with commercial hole transport materials

Hyein Ha,[†] Young Jae Shim,[†] Da Hwan Lee,[†] Eun Young Park,[†] In-Ho Lee,[‡] Seok-Keun Yoon[‡] and Min Chul Suh^{*,†}

[†] Organic Electronic Materials Laboratory, Department of Information Display, Kyung Hee University, Seoul 02447, Korea

[‡] P&H Tech Co., Ltd., Daewoo Frontier Valley, 16-25 Giheung-Gu, Yongin-Si, Gyeonggi-Do, Korea 17015

*Corresponding author: mcsuh@khu.ac.kr

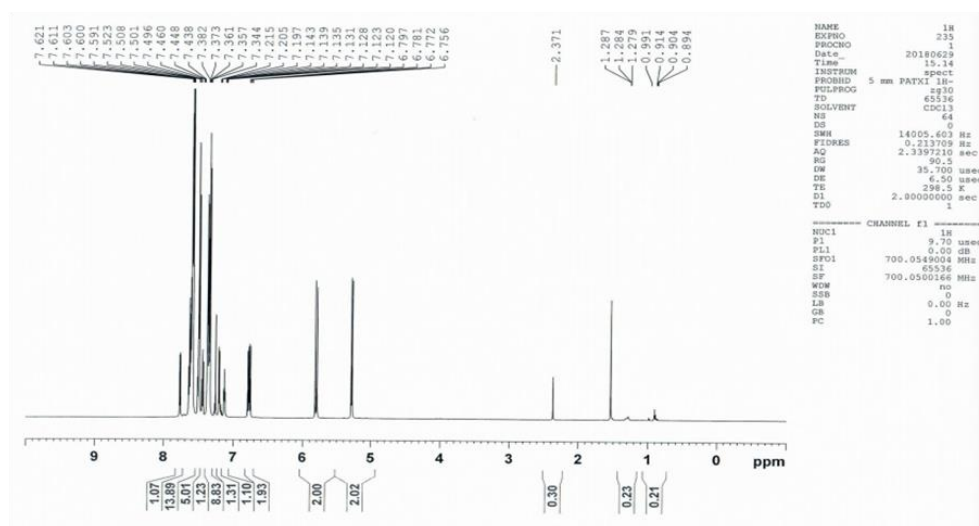
ORCID

Min Chul Suh: 0000-0002-1295-1693

Present Addresses

Department of Information Display, Kyung Hee University, Seoul 02447, Republic of Korea

(a)



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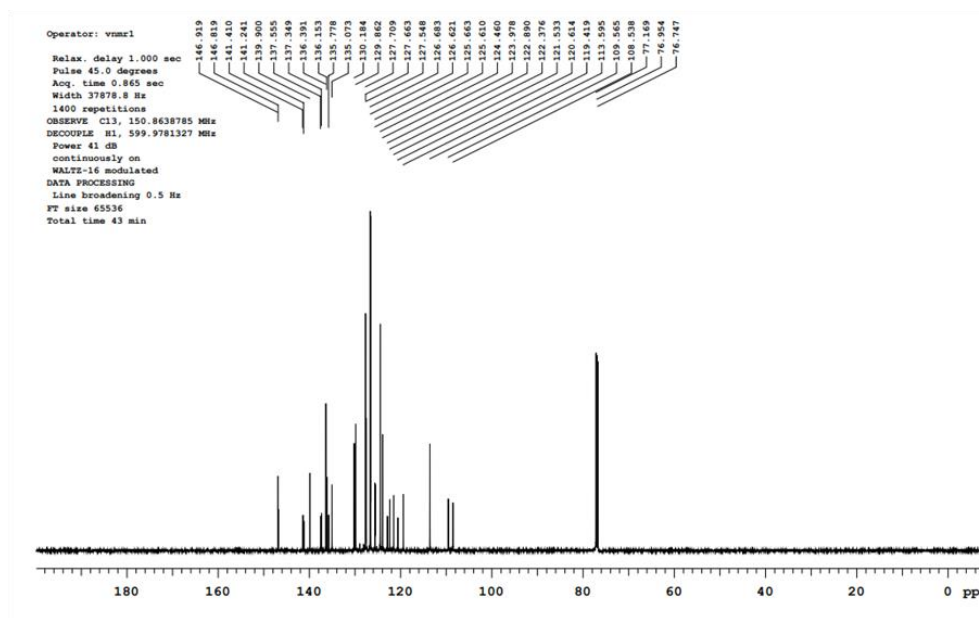


Figure S1. (a) ¹H NMR and (b) ¹³C NMR of PbV

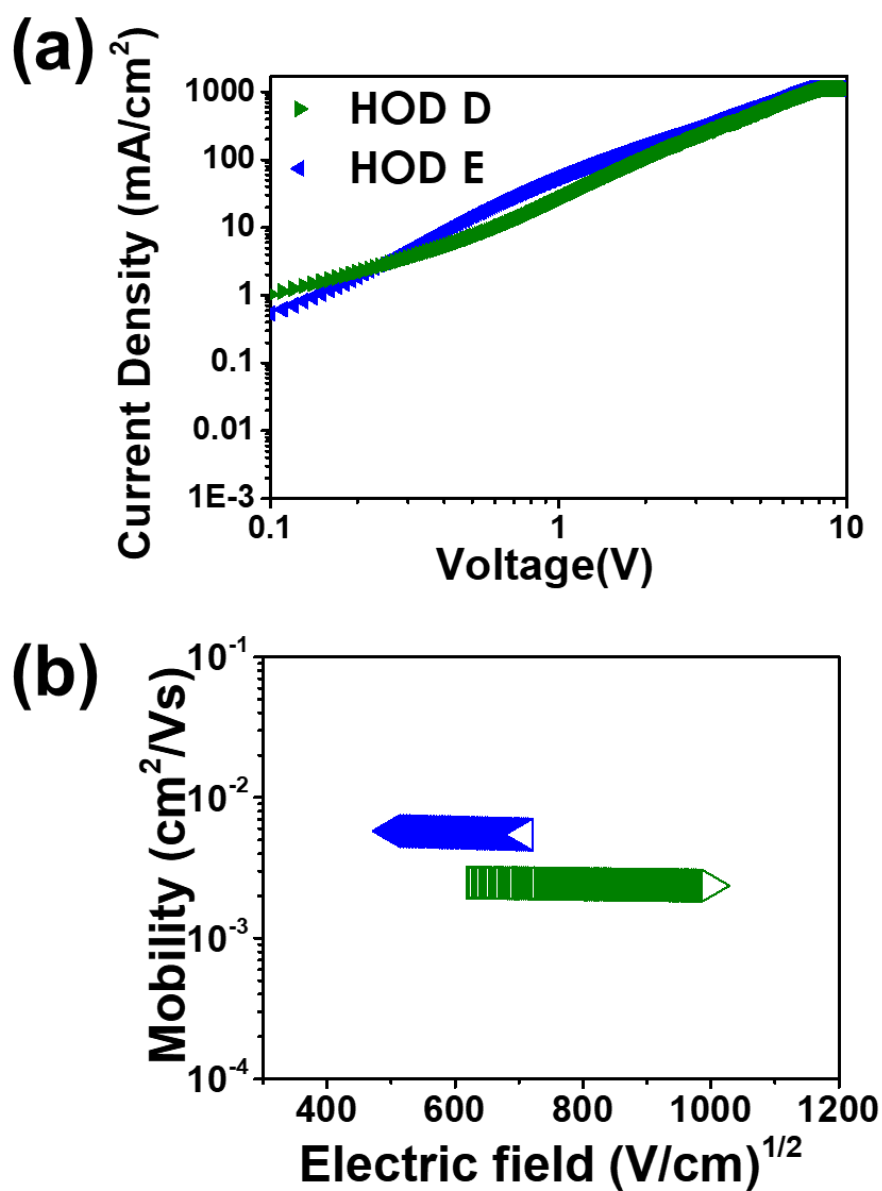


Figure S2. (a) Hole only devices and J-V characteristic (b) hole mobility for two types of HTL extracted from the SCLC region. (HOD D: poly-TPD, HOD E: TFB)

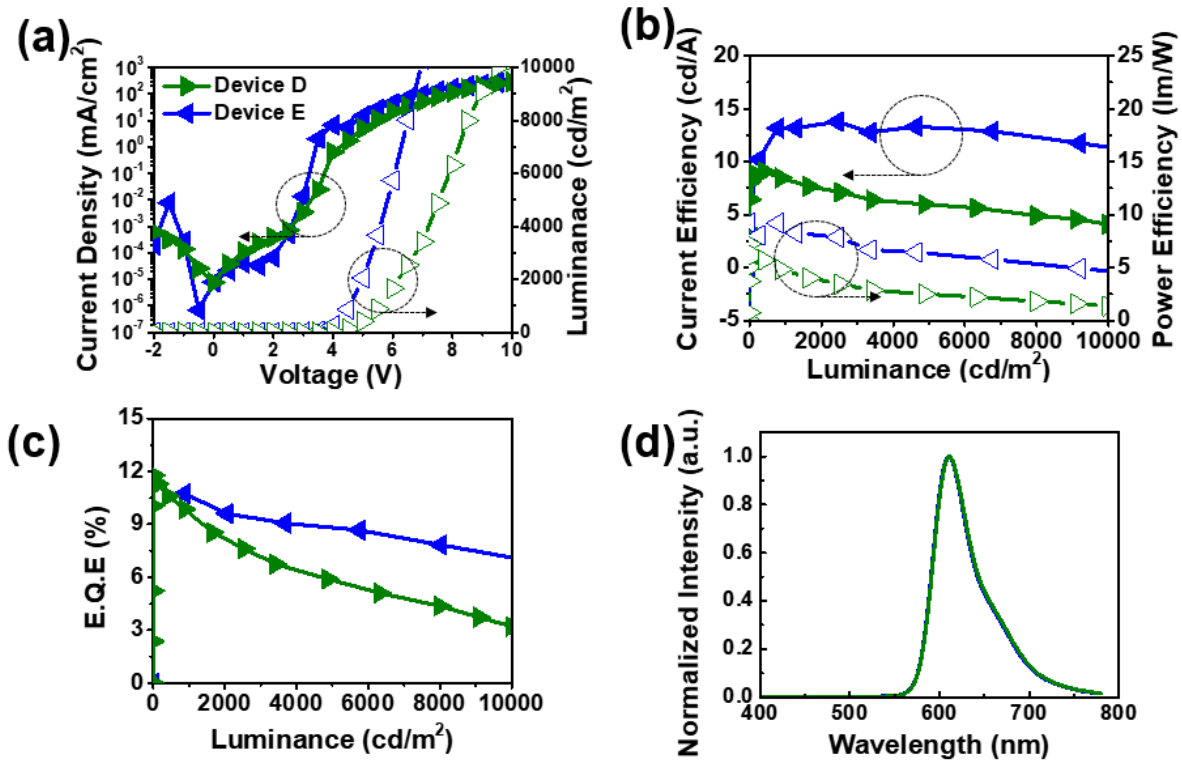


Figure S3. (a) J - V - L curves, (b) current and power efficiency curves according to the variation of L , (c) EQE - L , and (d) EL spectra of red devices measured at 1000 nits.

Table S1. Summary of device characteristics of the red PHOLED.

Device	V_{on}^a / V_{op}^b	CE ^c /PE ^d /EQE ^e		CIE (x,y)
		Maximum	1000 cd/m ²	
Device D	2.5 / 5.5	9.1 / 7.2 / 11.8	8.5 / 4.8 / 9.9	(0.65,0.35)
Device E	2.5 / 4.5	13.8 / 9.2 / 10.7	13.2 / 9.2 / 10.7	(0.65,0.35)

^a V_{on} [V]: voltage at 1 cd/m² ^b V_{op} [V]: voltage at 1000 cd/m² ^c CE [cdA⁻¹]: a current efficiency. ^d PE [lmW⁻¹]: a power efficiency. ^e EQE [%]: an external quantum efficiency estimated from the assumption of Lambertian distribution.

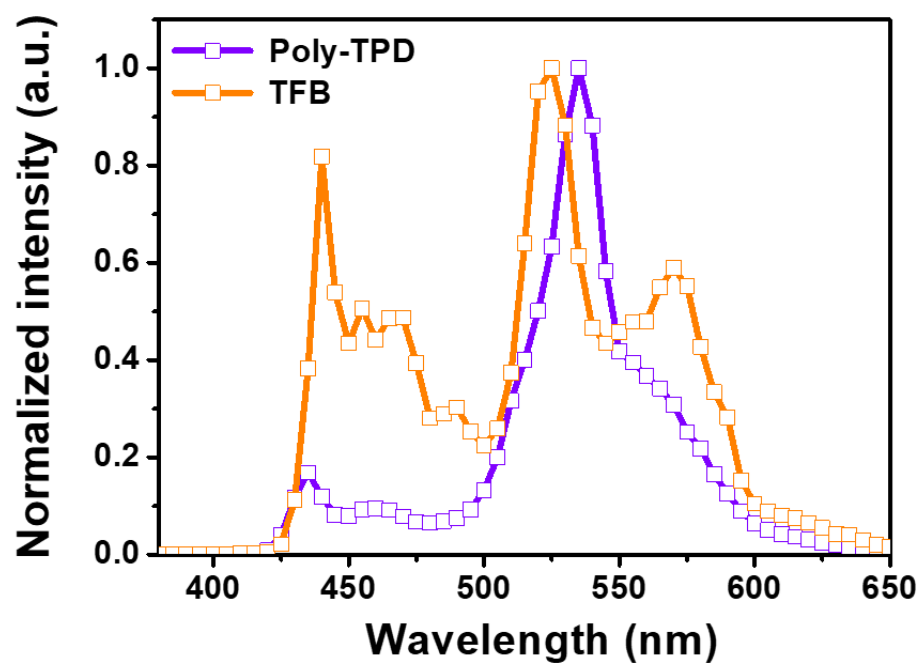


Figure S4. Low temperature photoluminescent spectra of dilute solutions of poly-TPD and TFB

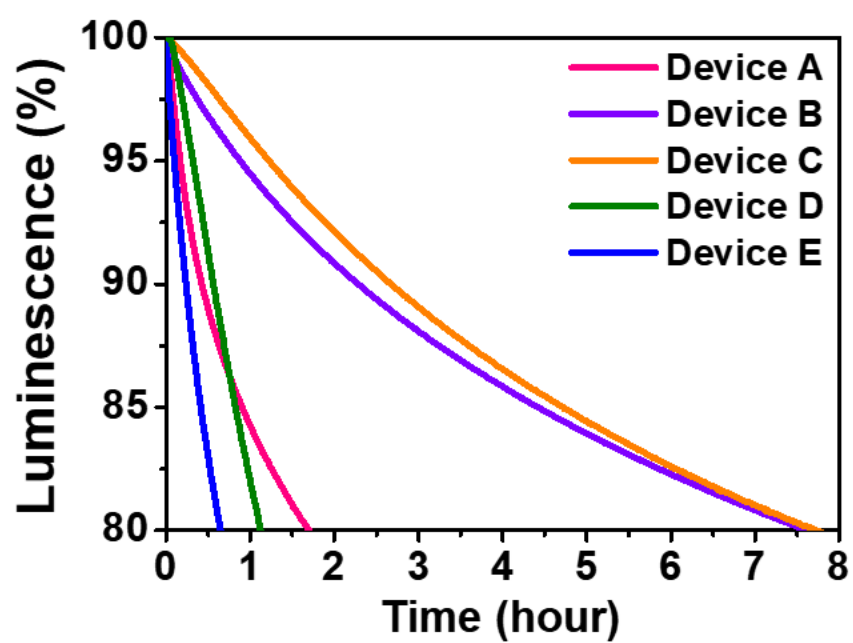


Figure S5. The result of lifetime measurement for red OLEDs started from 1000 cd/m²