Supporting Information

Efficient and stable hybrid organic light-emitting device based on inorganic metal oxide hole transport layer and electron transport layer

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Table S1. The turn-on voltages and efficiencies of HyOLEDs with different thicknesses of MoO_3.

the thickness of MoO_3 (nm)	V_{on} (V)	Maximum Current Efficiency (cd/A)	Maximum Power Efficiency (lm/W)
3	2.84	27.09	23.08
10	2.77	12.97	8.20
20	2.89	17.59	13.82
30	2.86	12.76	8.36
40	2.98	6.40	3.76
50	2.90	9.56	8.49
60	3.15	4.04	3.63
70	2.98	4.36	3.42
80	2.96	13.01	10.90
90	2.98	28.26	27.33
100	3.09	54.91	42.72
105	2.65	60.87	58.84
110	3.30	40.51	33.95
120	3.09	48.13	43.21

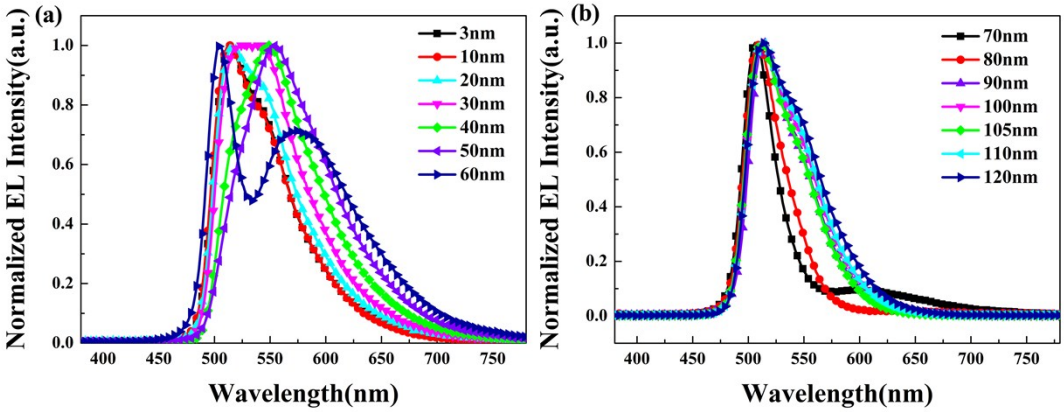
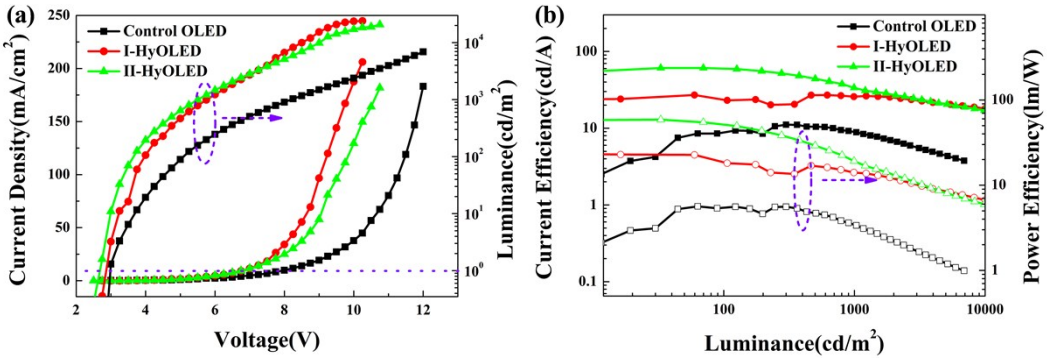
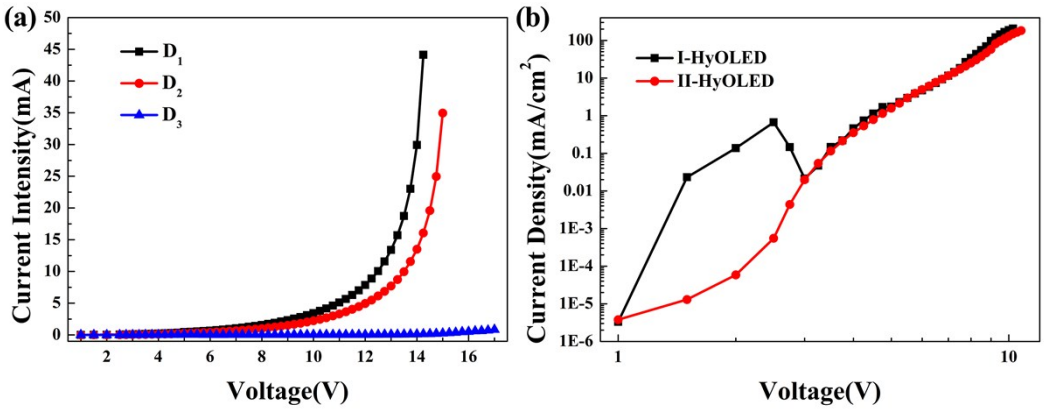


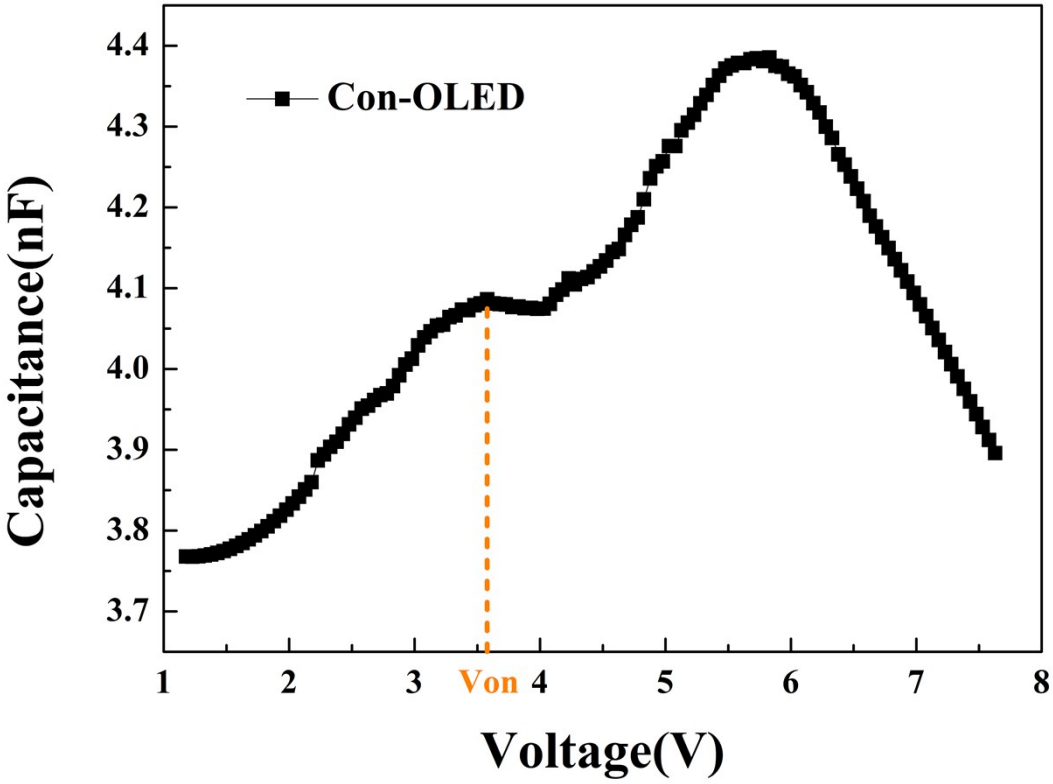
Figure S1. The spectra of HyOLEDs with different thicknesses of MoO_3.



Fugure S2. (a) The current density-voltage-luminance characteristics and (b) the current efficiency-luminance-power efficiency characteristics of Control OLED, I-HyOLED and II-HyOLED. The structure of the control device: ITO / ZnO / PEI / DMAC-BPP (10nm) / CBP:$Ir(ppy)_3$ (10:1 20nm) / TcTa (10nm) / TAPC (145nm) / MoO_3 (3nm) / Ag (120nm).



Fugure S3. (a) The current intensity of single–carrier devices D1, D2 and D3. (b) The current density-voltage characteristics of I-HyOLED and II-HyOLED. The structures of single-carrier devices: D_1: ITO / TAPC (50nm) / CBP:Ir(ppy)$_3$ (10:1 20nm) / TcTa (10nm) / TAPC (40nm) / MoO_3 (3nm) / Ag(120nm), D_2: ITO / TAPC (50nm) / CBP:Ir(ppy)$_3$ (10:1 20nm) / TcTa (10nm) / TAPC (40nm) / MoO_3 (105nm) / Ag(120 nm) and D_3: ITO / TAPC (50nm) / CBP:Ir(ppy)$_3$ (10:1 20nm) / TcTa (10nm) / TAPC (145nm) / Ag(120nm).



Fugure S4. The capacitance-voltage characteristic of Con-OLED.