Electronic Supplementary Material (ESI) for RSC Advances.

Supporting Information

Bis(2-(benzo[*d*]thiazol-2-yl)-5-fluorophenolate)beryllium: a high-performance electron transport material for phosphorescent organic light-emitting devices

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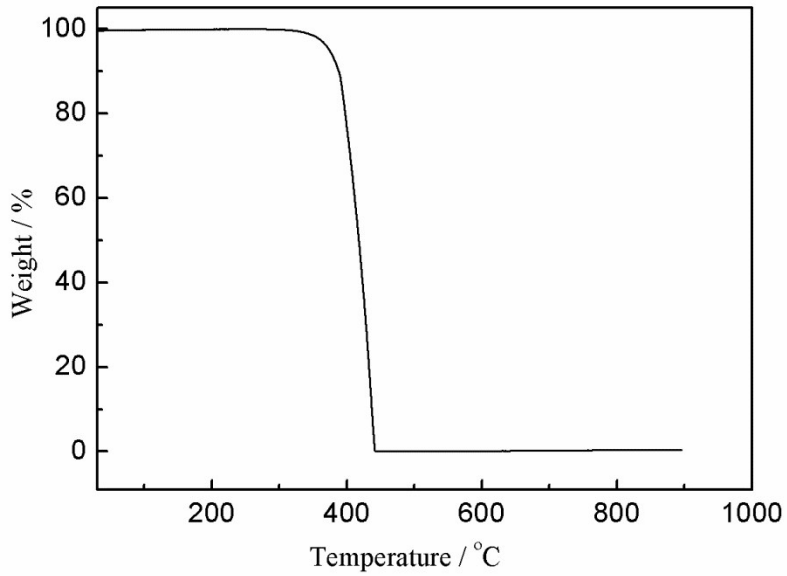


Fig. S1 TGA curve of $Be(FBTZ)_2$.

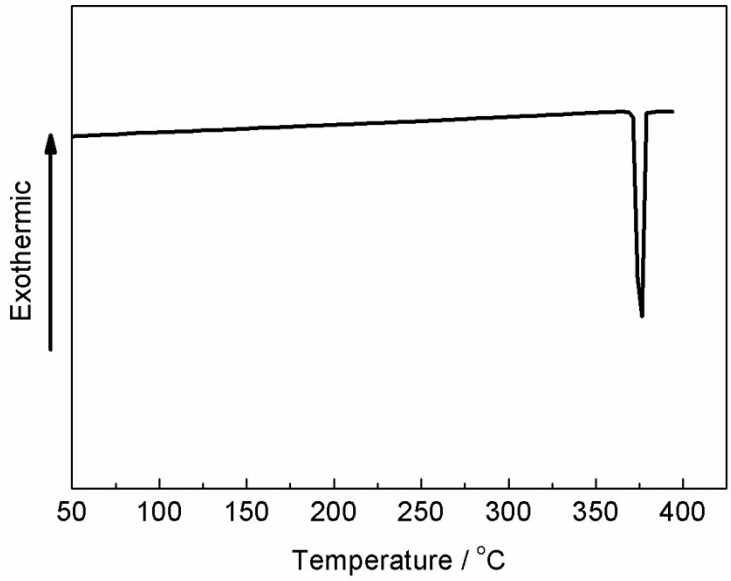


Fig. S2 DSC curve of $Be(FBTZ)_2$.

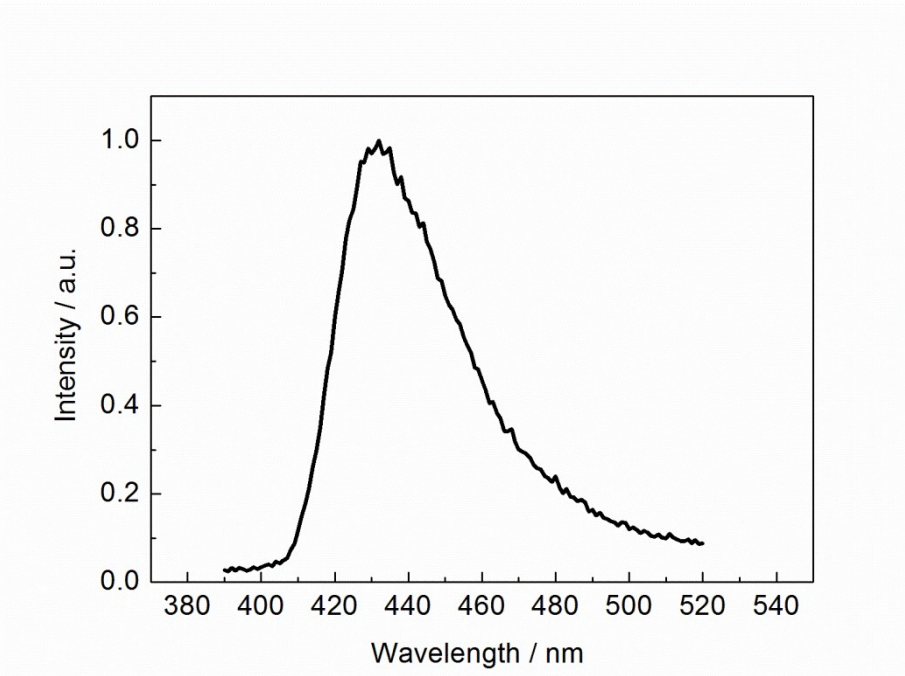


Fig. S3 Emission spectrum of the $CHCl_3$ solution of $Be(FBTZ)_2$ with the highest concentration available (*ca.* 5×10^{-3} M).

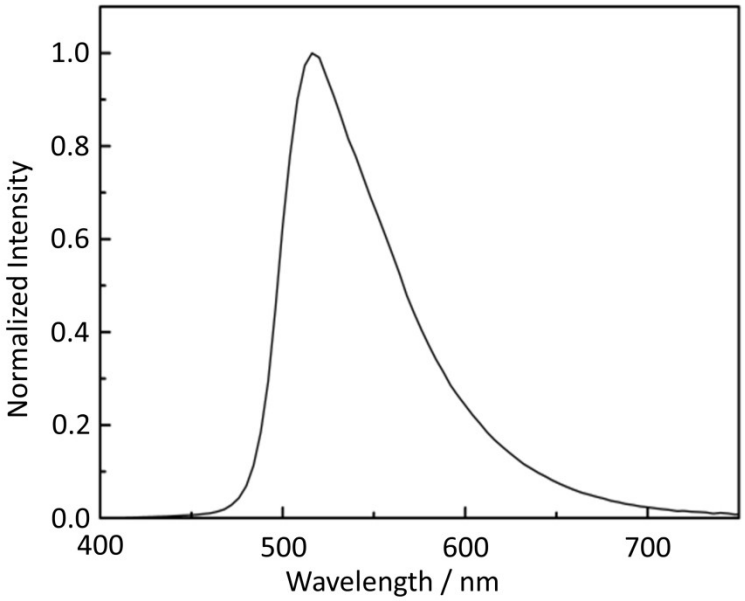


Fig. S4 Electroluminescent spectrum of D4.

Table S1 The LUMO levels, E_T values and electron mobilities of $Be(FBTZ)_2$ and some classic ETMs.

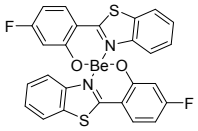
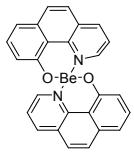
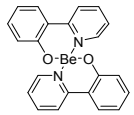
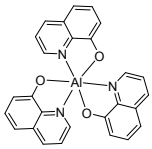
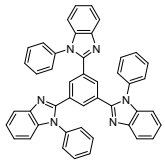
	LUMO (eV)	E_T (eV)	Electron mobility ($cm^2\ V^{-1}\ s^{-1}$)
 $Be(FBTZ)_2$	-3.14	2.62	$1.8–1.1 \times 10^{-4}$
 $Bebq_2$	-3.48 (ref. 1)	2.2 (ref. 2)	*ca.* 10^{-4} (ref. 5)
 $Bepp_2$	-2.6 (ref. 1)	2.7 (ref. 2)	*ca.* 10^{-4} (ref. 6)
 Alq_3	-3.1 (ref. 1)	2.03 (ref. 3)	2.0×10^{-6} (ref. 7)
 TPBI	-2.7 (ref. 1)	2.73 (ref. 4)	$3.3–8 \times 10^{-5}$ (ref. 8)

Table S2 Luminescence lifetimes (τ) of the thin film of $Be(FBTZ)_2$.

Wavelength / nm	τ_1 / ns	τ_2 / ns	τ_3 / ns
442	0.7 (81%)[a]	19.0 (18%)[a]	28.5 (1%)[a]
500	2.0 (20%)[a]	17.1 (64%)[a]	44.0 (16%)[a]

[a]Amplitudes of lifetime.

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