

Supplementary Information

Solution-Processable Bipolar Host Materials Composed of Fluorenyl, Carbazolyl and 1,3,4-Oxadiazolyl Derivatives: Synthesis and Application in Phosphorescent Organic Light-Emitting Diodes

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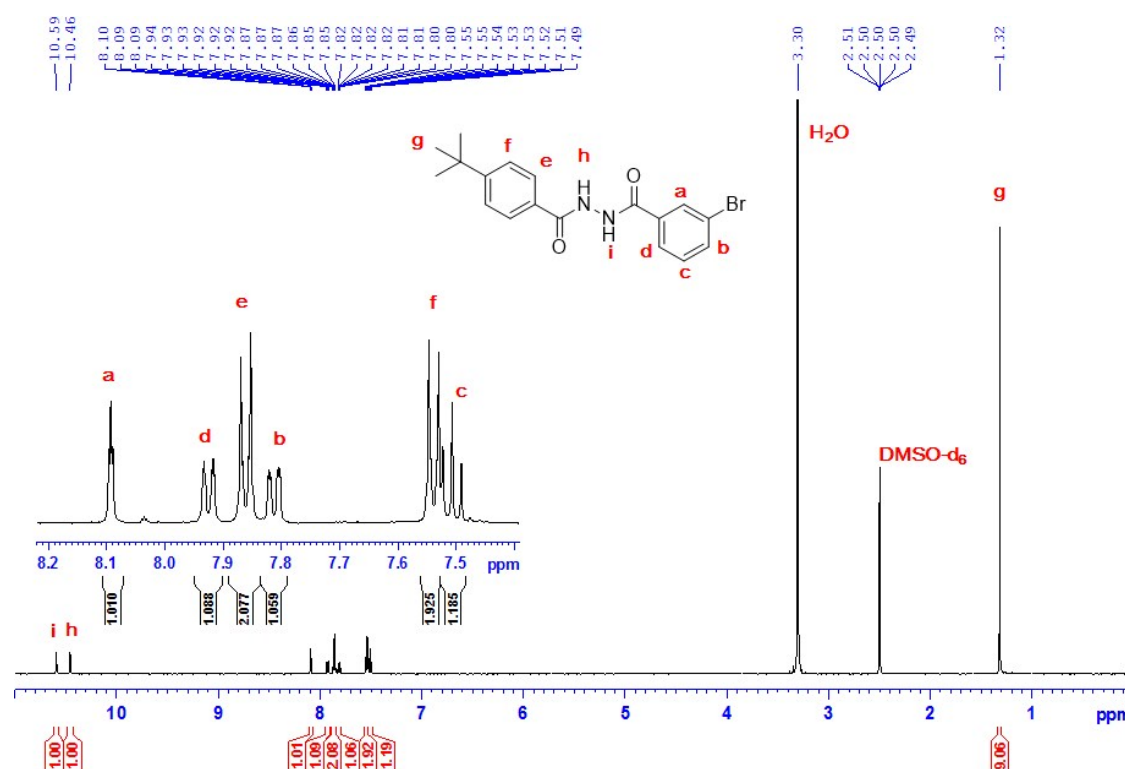


Fig. S1 ¹H NMR spectrum of compound 3.

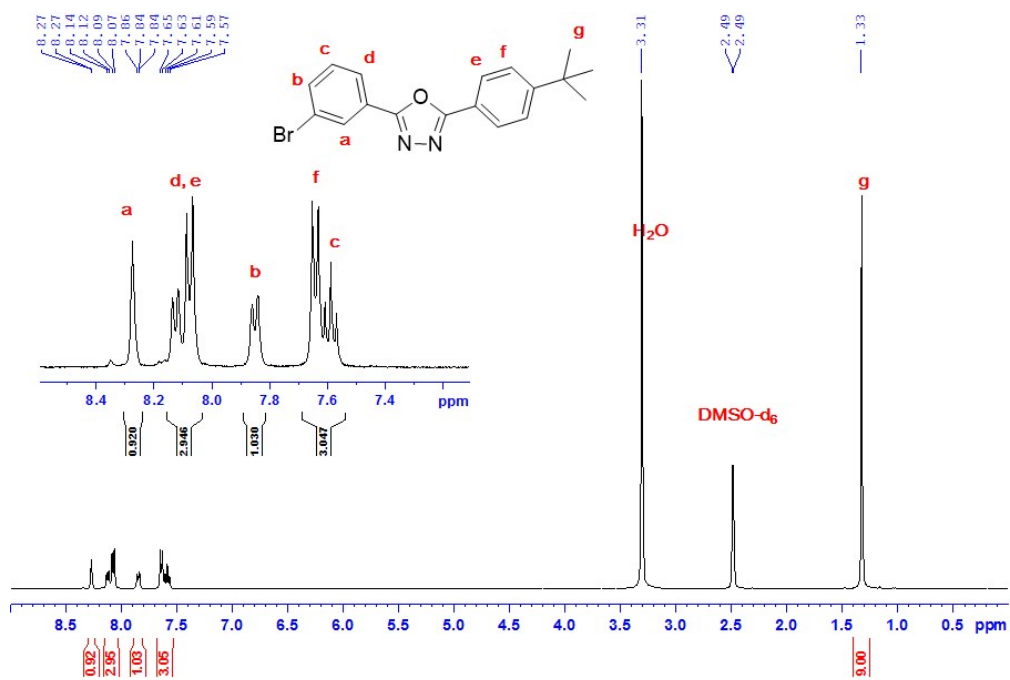


Fig. S2 ¹H NMR spectrum of compound 4.

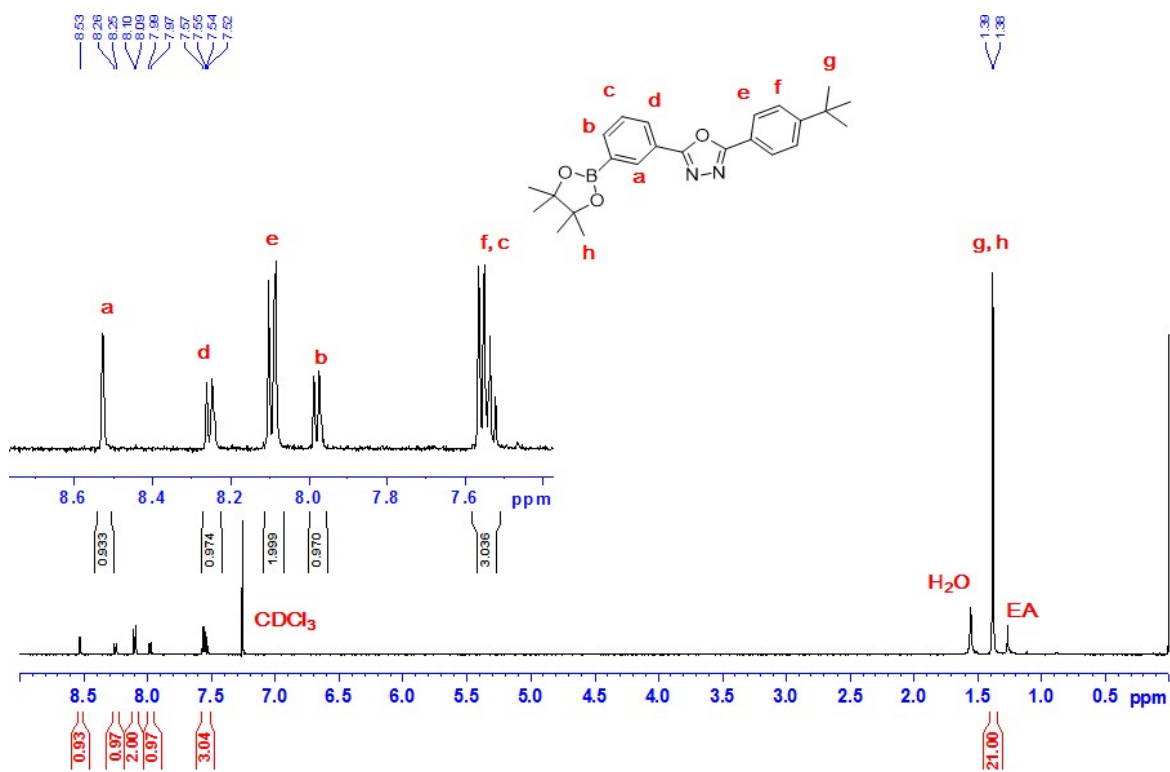


Fig. S3 ¹H NMR spectrum of compound 6.

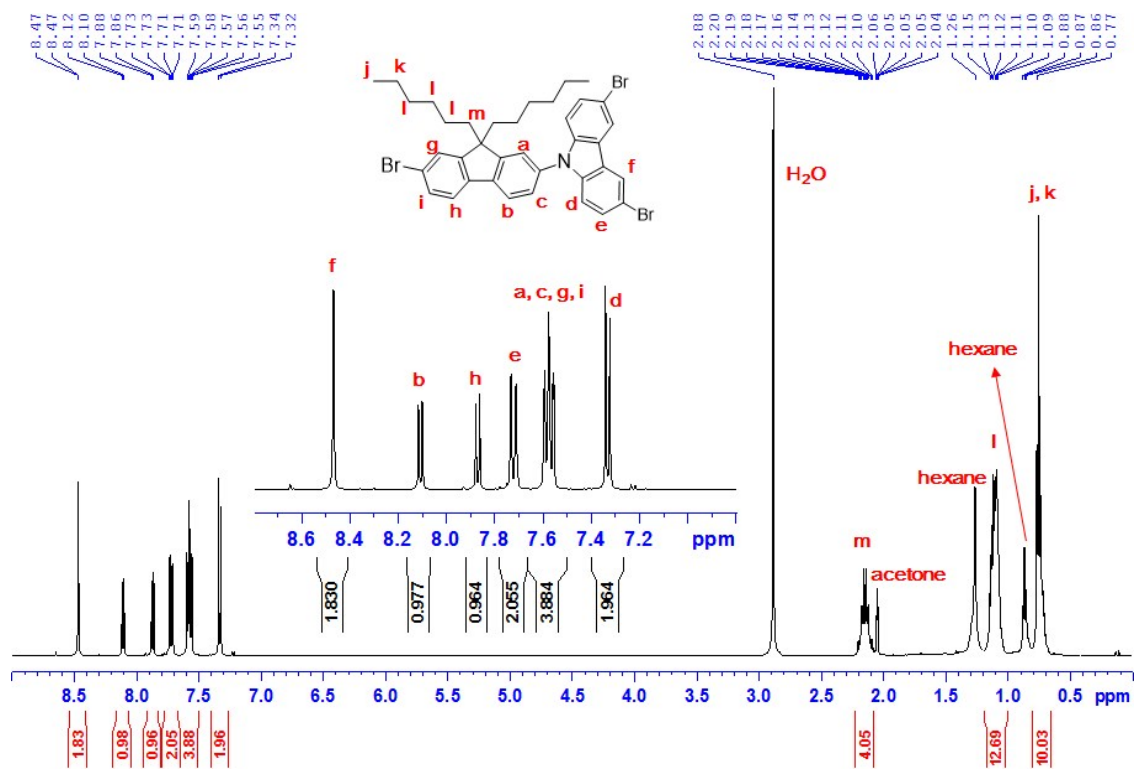


Fig. S4 ^1H NMR spectrum of compound 9.

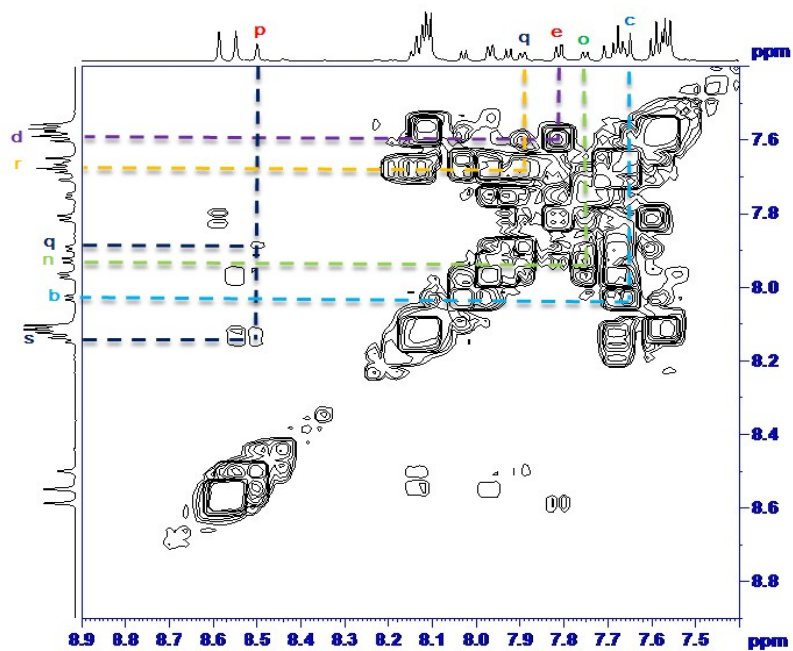


Fig. S5. ^1H COSY spectrum of FC30.

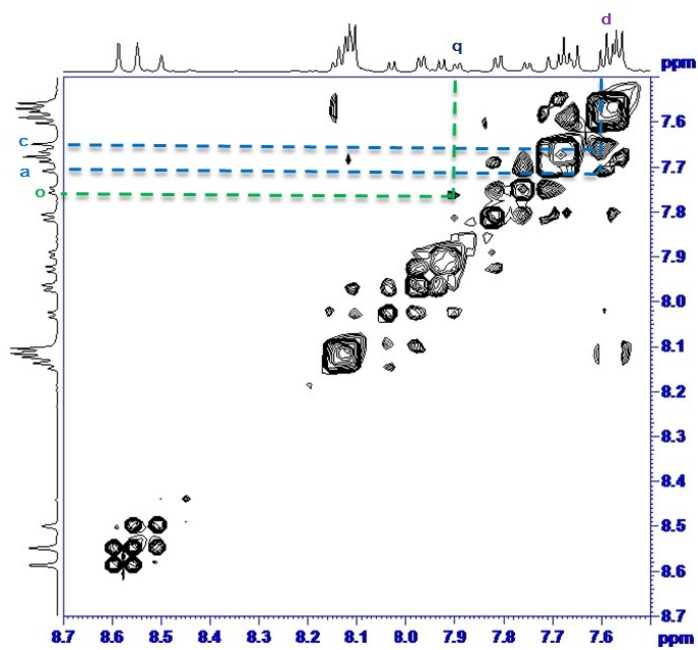


Fig. S6. NOESY spectrum of FC3O.

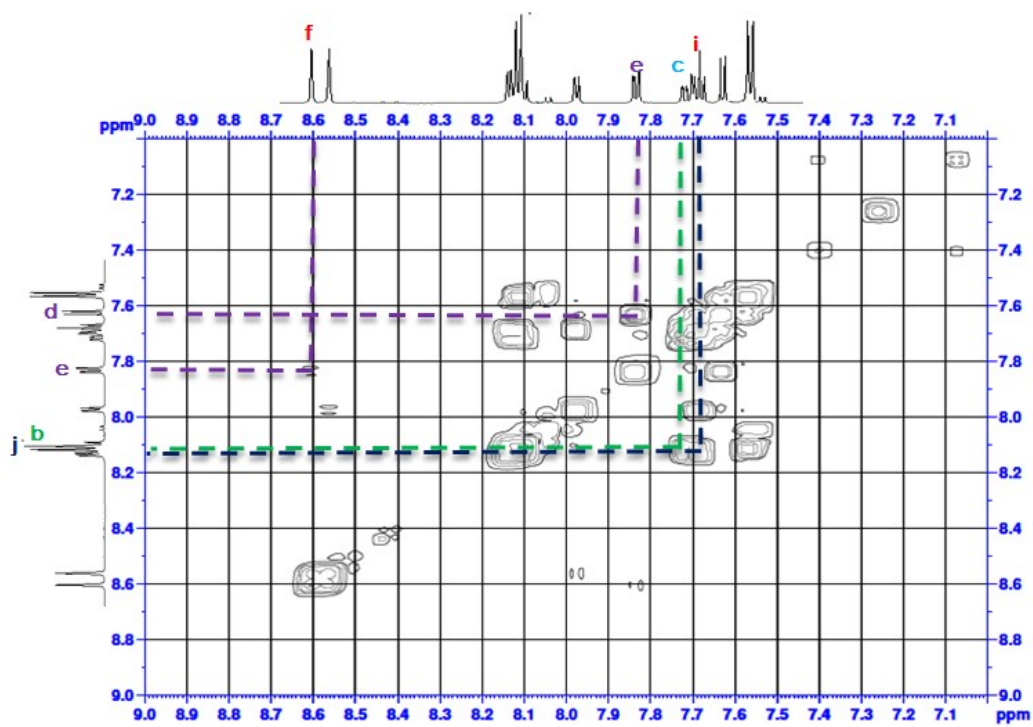


Fig. S7. ^1H COSY spectrum of FC4O.

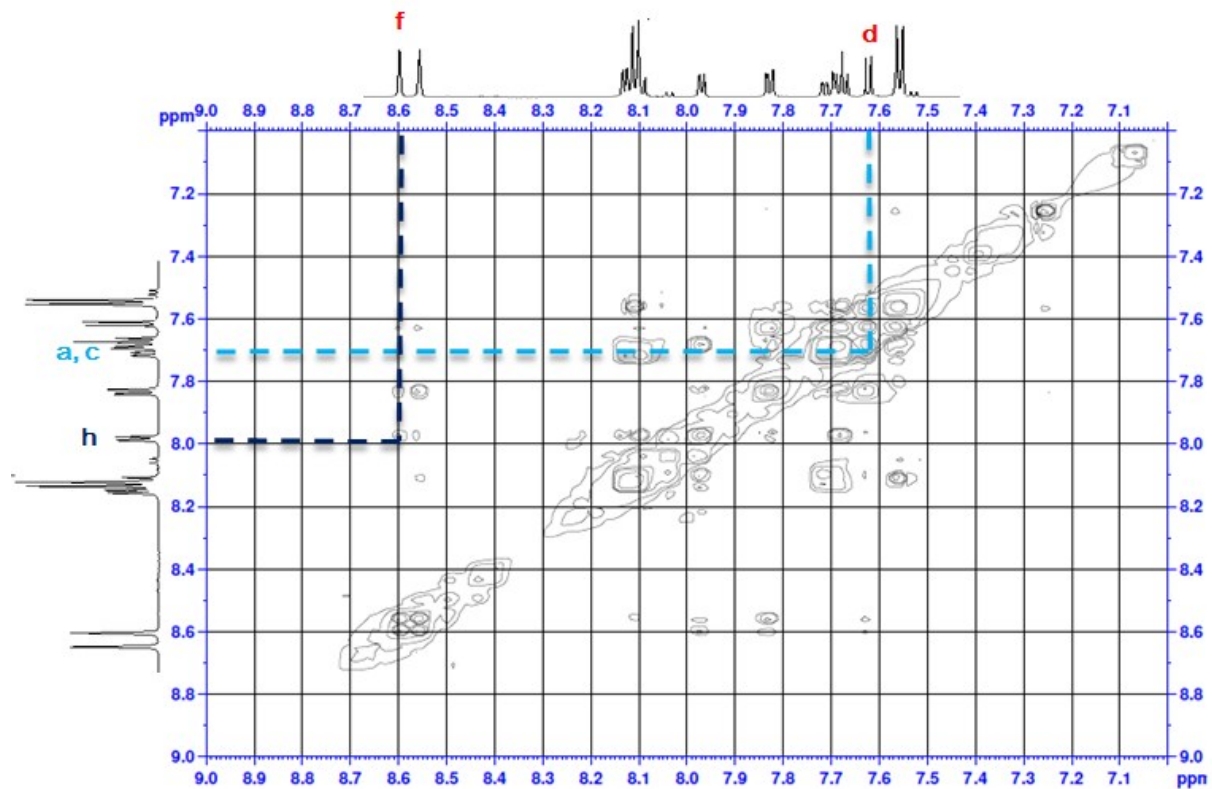


Fig. S8. NOESY spectrum of FC40.

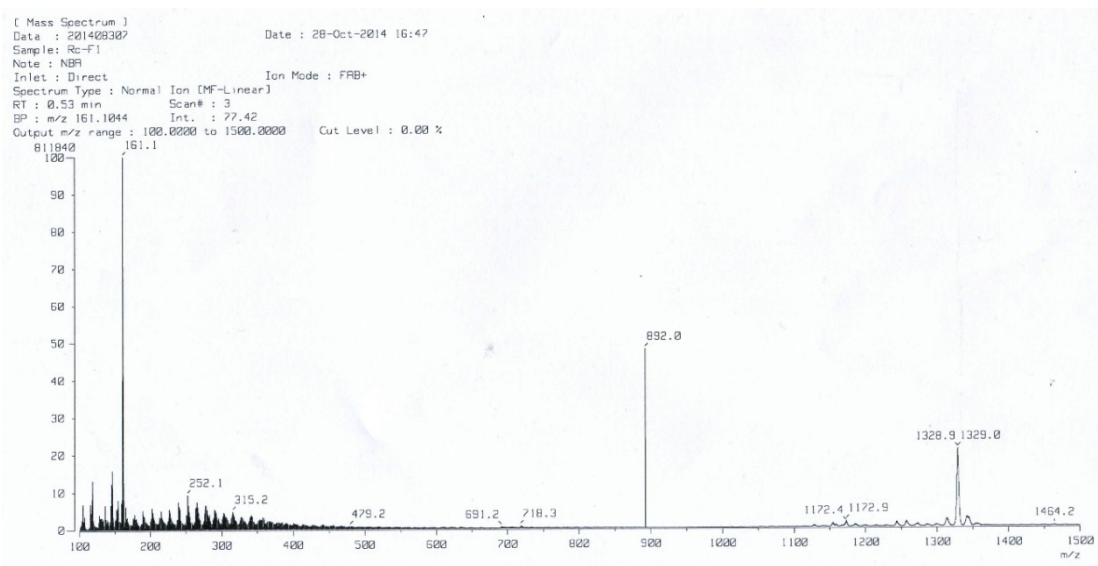


Fig. S9. Mass spectrum of FC30.

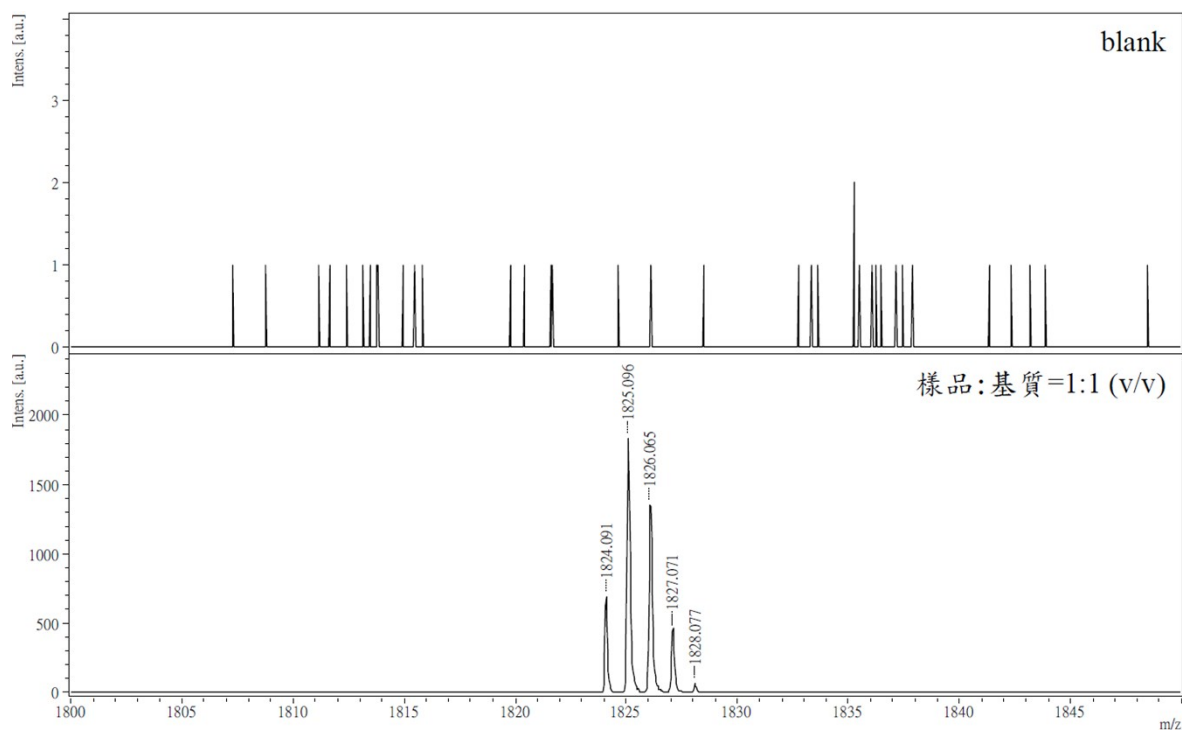


Fig. S10. Mass spectrum of **FC4O**.

Table S2. Electroluminescent properties of the devices with Ir(ppy)₃-doped **FC3O** as emission layer (EML).^a

wt% Ir(ppy) ₃ in FC3O	V _{on} ^b (V)	L _{max} ^c (cd/m ²)	LE _{max} ^d (cd/A)
1.0	6.5	4,292	4.8
2.0	7.1	9,358	14.9
3.0	7.7	7,428	9.4

^a Device configuration: ITO/PEDOT:PSS/EML/BCP(25 nm)/LiF(1 nm)/Al(90 nm); the emission layer was spin-coated from toluene solution. ^b Turn-on voltage at 10 cd/m². ^c Maximum luminance. ^d Maximum luminance efficiency.

Table S1. Electroluminescent properties of the devices with Ir(ppy)₃-doped **FC40** as emission layer (EML).^a

wt% Ir(ppy) ₃ in FC40	V _{on} ^b (V)	L _{max} ^c (cd/m ²)	LE _{max} ^d (cd/A)
0.5	7.1	5,242	7.8
1.0	6.9	9,590	9.1
1.5	7.3	10,232	18.2
2.0	8.0	13,582	12.0

^a Device configuration: ITO/PEDOT:PSS/EML/BCP(25 nm)/LiF(1 nm)/Al(90 nm); the emission layer was spin-coated from toluene solution. ^b Turn-on voltage at 10 cd/m². ^c Maximum luminance. ^d Maximum luminance efficiency.