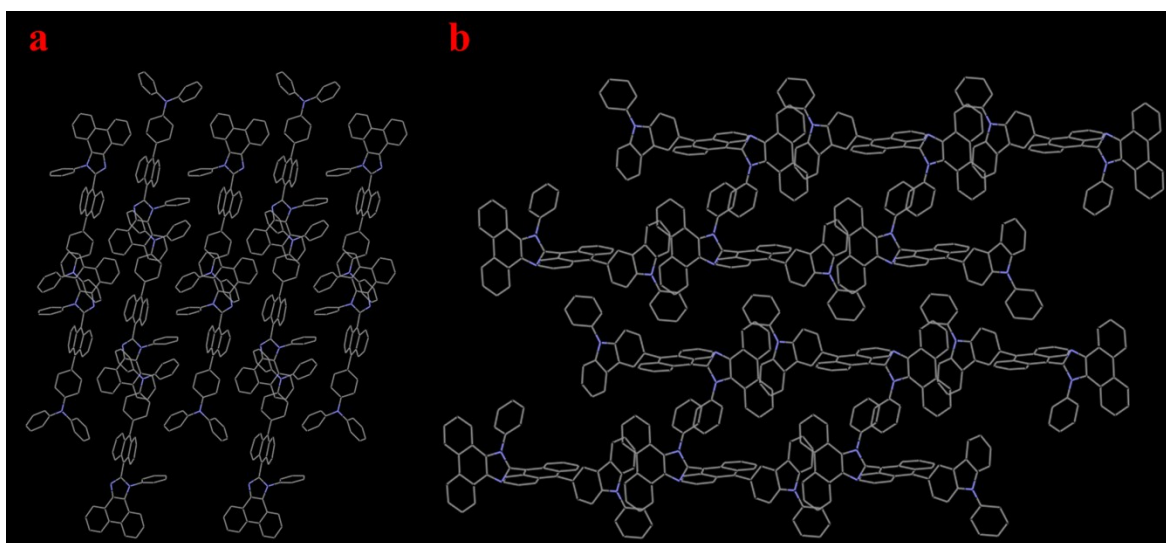


## Electronic Supplementary Information

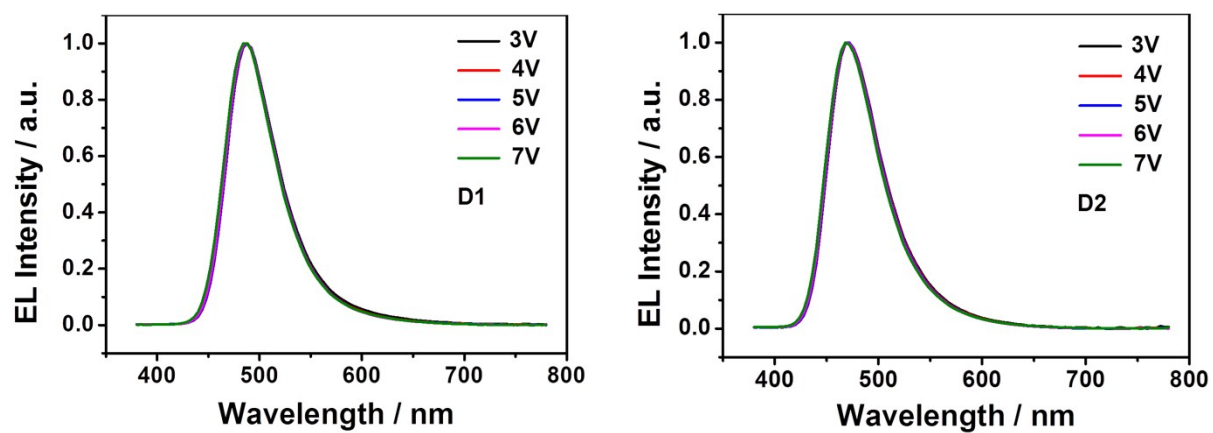
### **Structurally simple non-doped sky-blue OLEDs with high luminance and efficiencies at low driving voltages**

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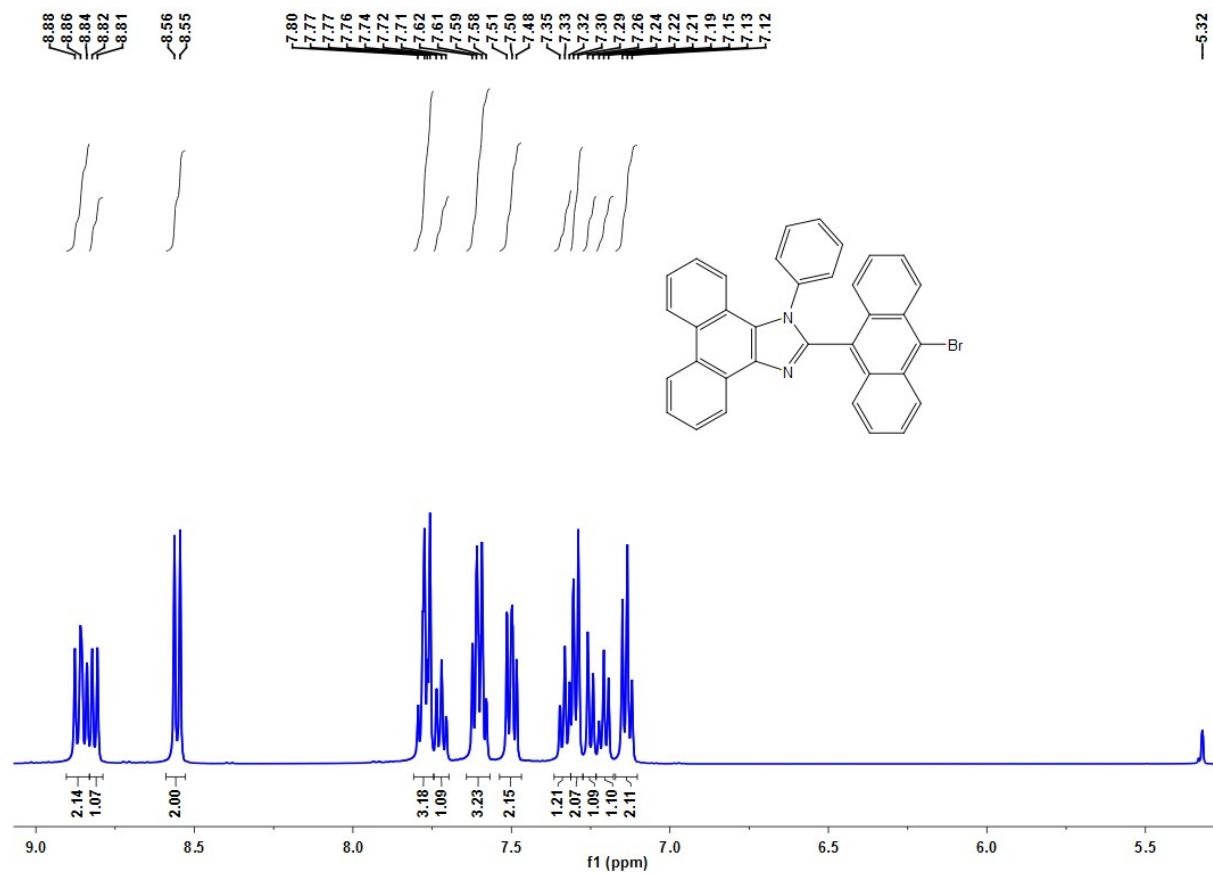
State Key Laboratory of Supramolecular Structure and Materials, College of Chemistry, Jilin  
University, Changchun 130012, P. R. China.



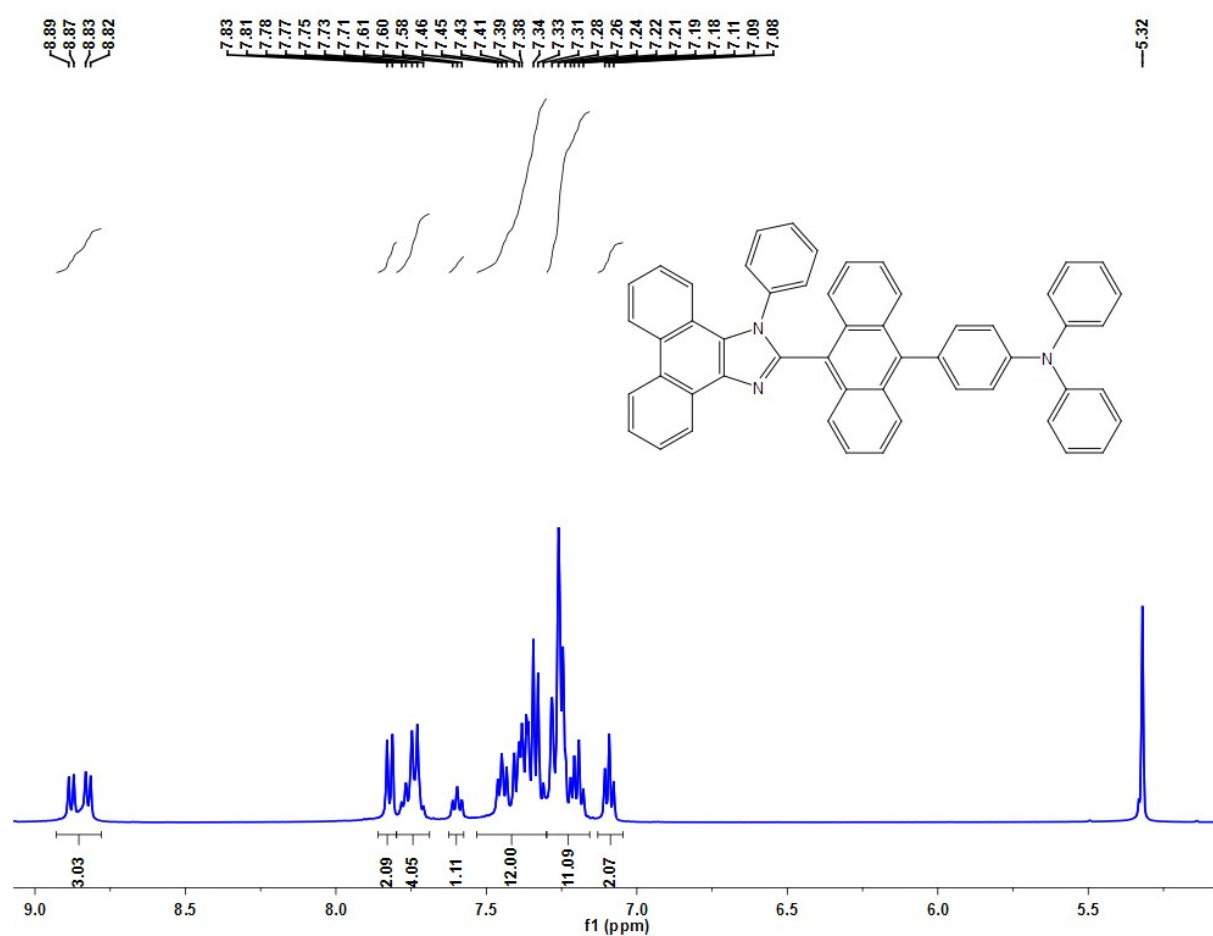
**Fig. S1** Crystal packing structures of TPA-An-PPI (a) and PCz-An-PPI (b) with hydrogen atoms omitted for clarity (view along  $a$ -axis).



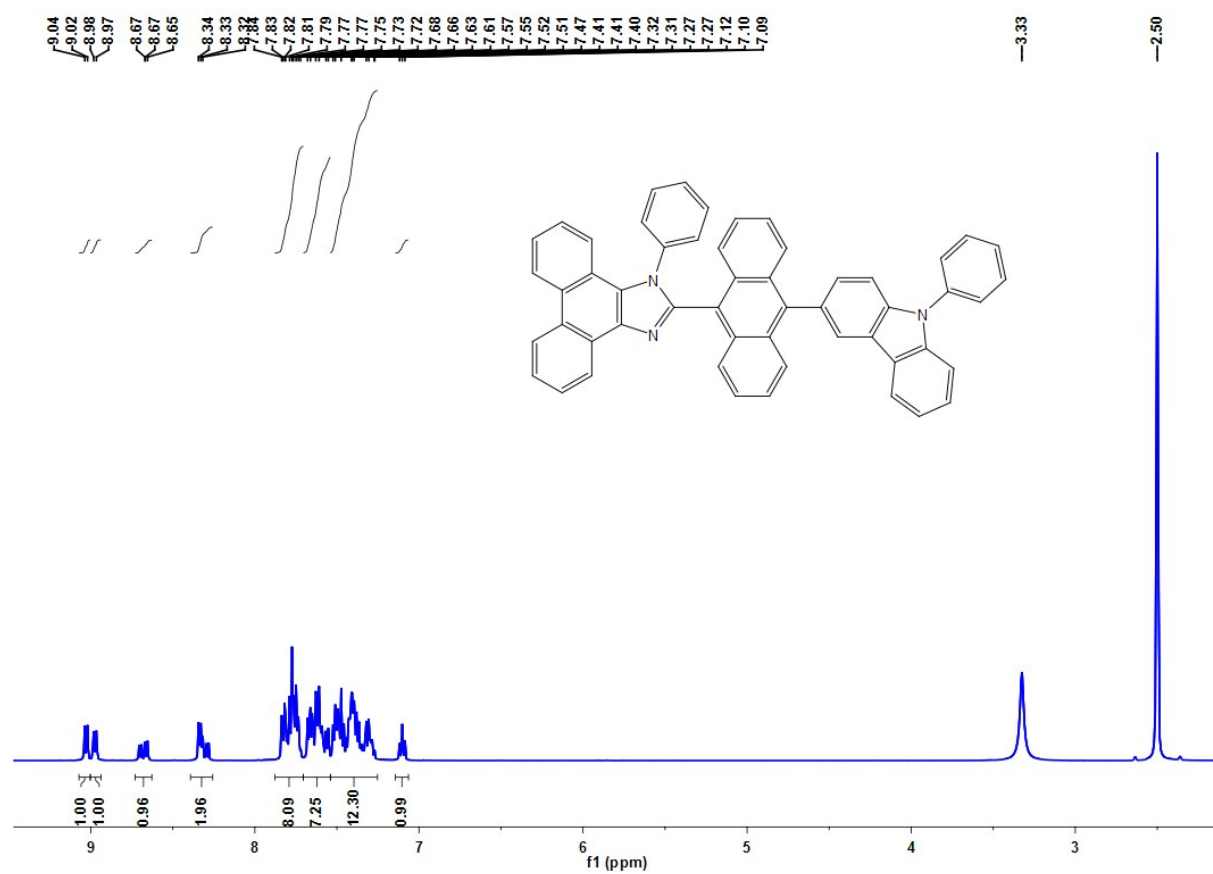
**Fig. S2** Emission spectra of D1 and D2 measured at different driving voltages.



**Fig. S3** <sup>1</sup>H NMR spectrum of **Br-An-PPI** measured in CD<sub>2</sub>Cl<sub>2</sub> (500 MHz).



**Fig. S4** <sup>1</sup>H NMR spectrum of TPA-An-PPI measured in CD<sub>2</sub>Cl<sub>2</sub> (500 MHz).



**Fig. S5** <sup>1</sup>H NMR spectrum of PCz-An-PPI measured in DMSO-*d*<sub>6</sub> (500 MHz).

**Single-crystal X-ray diffraction data of TPA-An-PPI and PCz-An-PPI:**

TPA-An-PPI,  $C_{53}H_{35}N_3$ ,  $M = 713.84$ , triclinic,  $P-1$ ,  $a = 9.774(2) \text{ \AA}$ ,  $b = 14.218(3) \text{ \AA}$ ,  $c = 14.357(3) \text{ \AA}$ ,  $\alpha = 90.59(3)^\circ$ ,  $\beta = 105.40(3)^\circ$ ,  $\gamma = 104.73(3)^\circ$ ,  $V = 1853.8(8) \text{ \AA}^3$ ,  $Z = 2$ ,  $T = 293 \text{ K}$ , 8417 reflections measured, 5598 unique. The final  $wR_2$  was 0.1450 (all data) and  $R_1$  was 0.0517 ( $I \geq 2\sigma(I)$ ).

PCz-An-PPI,  $C_{53}H_{33}N_3$ ,  $M = 711.82$ , triclinic,  $P-1$ ,  $a = 9.0678(18) \text{ \AA}$ ,  $b = 13.681(3) \text{ \AA}$ ,  $c = 16.569(3) \text{ \AA}$ ,  $\alpha = 94.64(3)^\circ$ ,  $\beta = 102.84(3)^\circ$ ,  $\gamma = 106.29(3)^\circ$ ,  $V = 1901.0(8) \text{ \AA}^3$ ,  $Z = 2$ ,  $T = 293 \text{ K}$ , 8467 reflections measured, 3624 unique. The final  $wR_2$  was 0.2337 (all data) and  $R_1$  was 0.0753 ( $I \geq 2\sigma(I)$ ).