Supporting Information for:

Pyrene functionalized triphenylamine-based dyes: synthesis, photophysical properties and applications in OLEDs

Yong Zhan, Jiang Peng, Kaiqi Ye*, Pengchong Xue, Ran Lu*

State Key Laboratory of Supramolecular Structure and Materials, College of

Chemistry, Jilin University, Changchun 130012, P. R. China.

Fax: +86-431-88923907; Tel: +86-431-88499179

E-mail: <u>yekq@jlu.edu.cn</u>, <u>luran@mail.jlu.edu.cn</u>



Fig. S1 Concentration-dependent fluorescent emission spectra of (a) TP, (b) TCP, and (c) TCCP in THF ($\lambda_{ex} = 400$ nm).



Fig. S2 The optimized configurations for compounds **TP**, **TCP** and **TCCP** calculated by the TDDFT/B3LYP/6-31G (d) level method on Gaussian 03 software.



Fig. S3 ¹H-NMR (500 MHz, CDCl₃) spectrum of compound **1**.



Fig. S4 The MALDI/TOF MS spectrum of compound 1.



Fig. S5 ¹H-NMR (500 MHz, CDCl₃) spectrum of compound **2**.



Fig. S6 The MALDI/TOF MS spectrum of compound 2.



Fig. S7 ¹H-NMR (500 MHz, CDCl₃) spectrum of compound **3**.



Fig. S8 The MALDI/TOF MS spectrum of compound 3.



Fig. S9 ¹H-NMR (500 MHz, CDCl₃) spectrum of compound 4.



Fig. S10 The MALDI/TOF MS spectrum of compound 4.



Fig. S11 ¹H-NMR (500 MHz, CDCl₃) spectrum of compound **5**.



Fig. S12 The MALDI/TOF MS spectrum of compound 5.



. Fig. S13 ¹H-NMR (500 MHz, CDCl₃) spectrum of compound 6.



Fig. S14 The MALDI/TOF MS spectrum of compound 6.



Fig. S15 ¹H-NMR (500 MHz, CDCl₃) spectrum of compound **TP**.



Fig. S16¹³C-NMR (125 MHz, CDCl₃) spectrum of compound TP.



Fig. S17 The MALDI/TOF MS spectrum of compound TP.





Fig. S18 ¹H-NMR (500 MHz, CDCl₃) spectrum of compound **TCP**.



Fig. S19¹³C-NMR (125 MHz, CDCl₃) spectrum of compound TCP.



Fig. S20 The MALDI/TOF MS spectrum of compound TCP.



Fig. S21 ¹H-NMR (500 MHz, CDCl₃) spectrum of compound **TCCP**.



Fig. S22 ¹³C-NMR (125 MHz, CDCl₃) spectrum of compound TCCP.



Fig. S23 The MALDI/TOF MS spectrum of compound TCCP.