

*Electronic Supplementary Information (ESI)*

## **Construction of Efficient Deep Blue AIE Emitters with Triphenylamine and TPE Moieties for Nondoped OLEDs**

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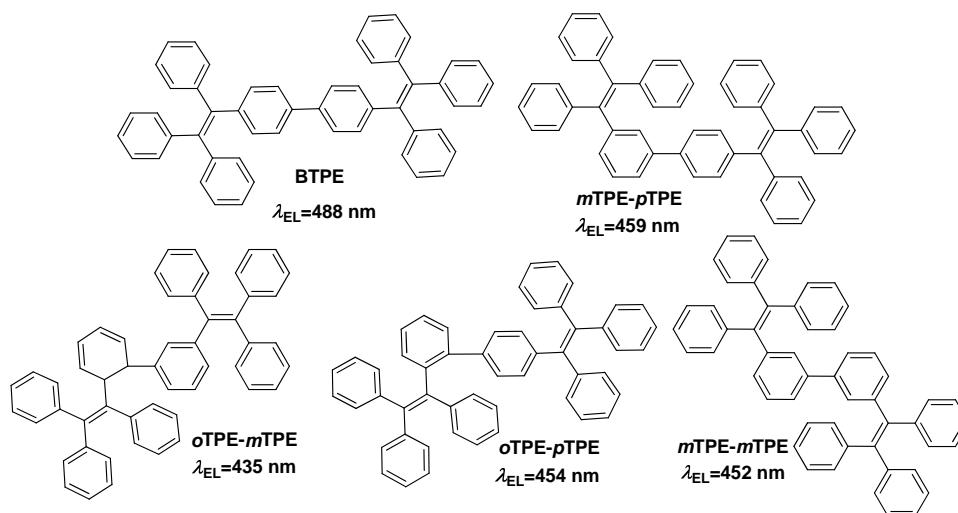


Chart S1 Chemical structures and EL peaks of BTPE and its four derivatives.

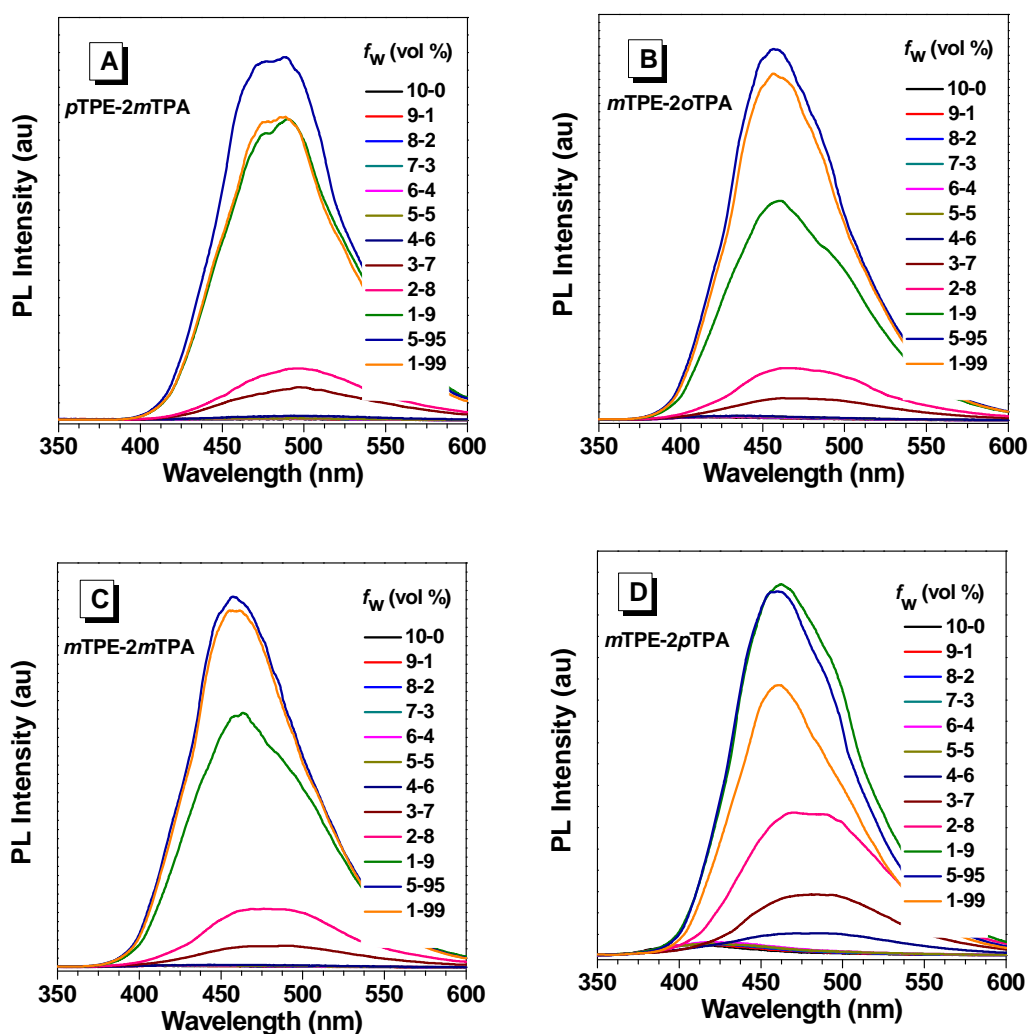
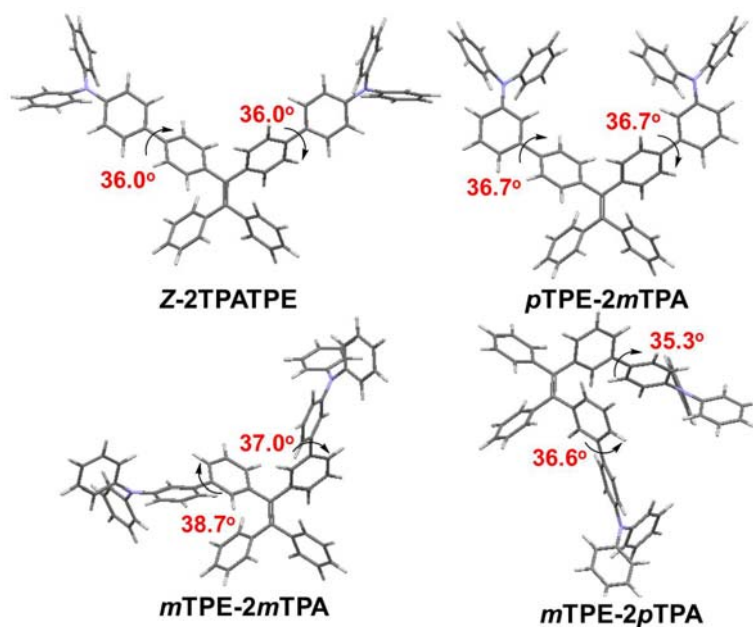
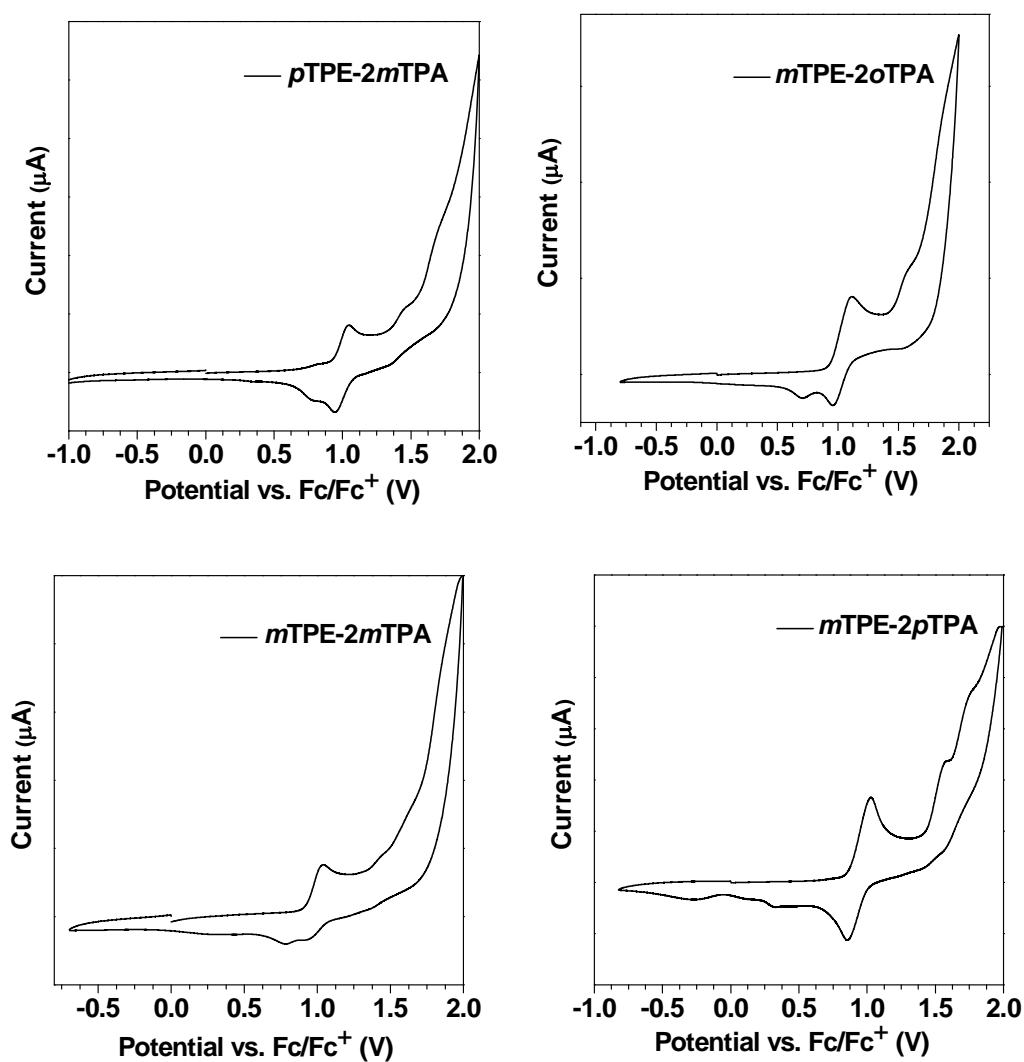


Fig. S1 PL spectra of *p*TPE-2*m*TPA (A), *m*TPE-2*o*TPA (B), *m*TPE-2*m*TPA (C) and *m*TPE-2*p*TPA (D) in THF/H<sub>2</sub>O mixtures with different water fractions. Concentration ( $\mu$ M):  $\sim$ 10; excitation wavelength (nm): 310 for (A)-(C) and 330 for (D).



**Fig. S2** The dihedral angles of the phenyl blades between TPE and TPA moieties according to the optimized structures of Z-2TPATPE, pTPE-2mTPA, mTPE-2mTPA and mTPE-2pTPA.



**Fig. S3** Cyclic Voltammograms of pTPE-2mTPA, mTPE-2oTPA, mTPE-2mTPA and mTPE-2pTPA in CH<sub>2</sub>Cl<sub>2</sub>.