Electronic Supplementary Material (ESI) for RSC Advances.

Achieving a High-Efficiency Dual-Core Chromophore for Emission of Blue Light by Testing Different Side Groups and Substitution Positions

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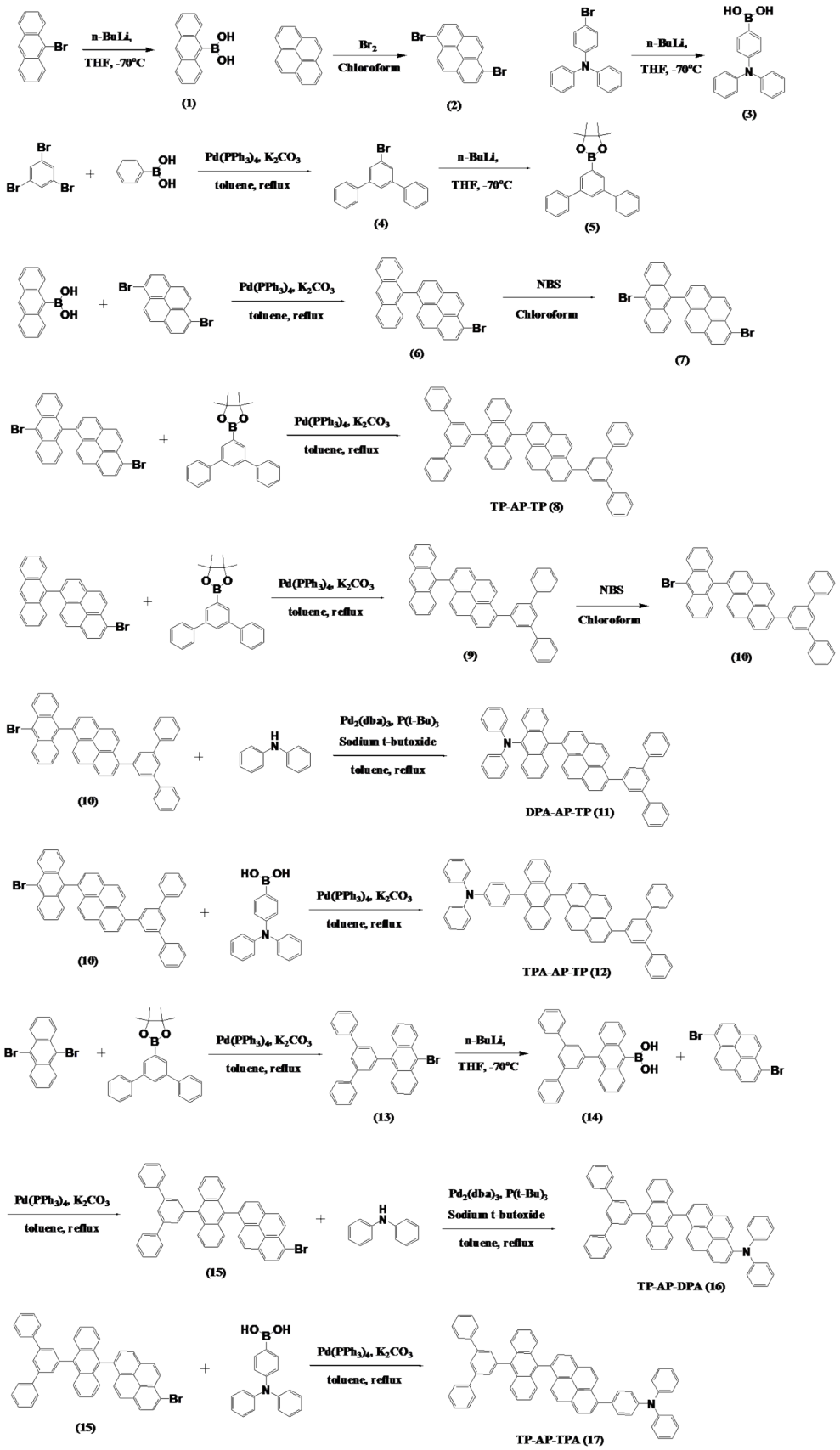

Fig. S1. Synthetic routes of synthesized compounds

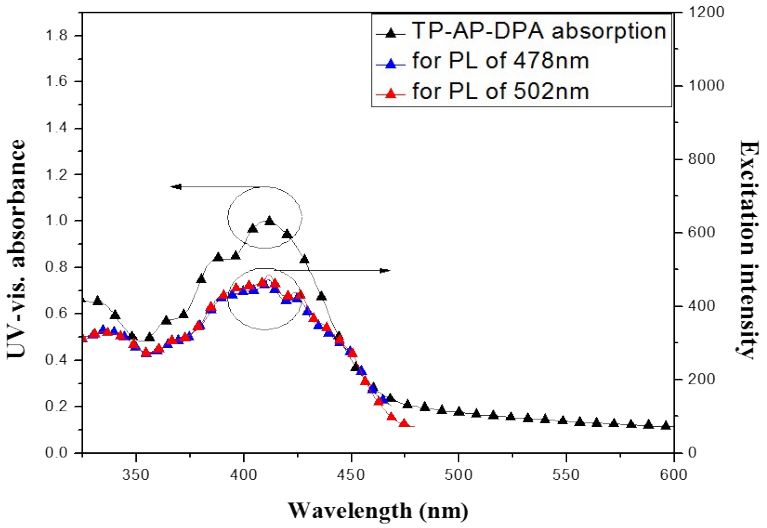

Fig. S2. UV-vis. absorption spectrum and excitation spectra of TP-AP-DPA film (thickness: 50nm)

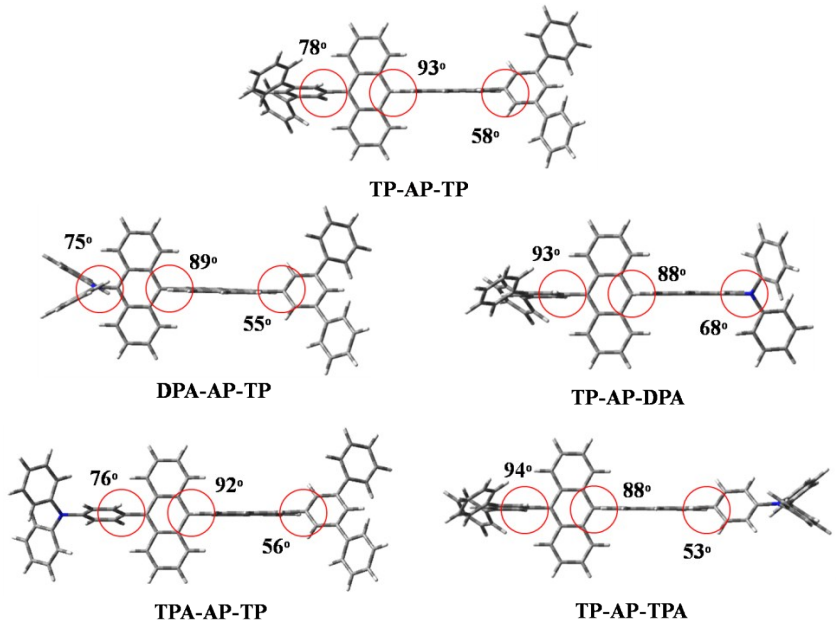

Fig. S3. Dihedral angles of the S_0 states of the compounds calculated at the CAM-B3LYP/6-31G(d) level.

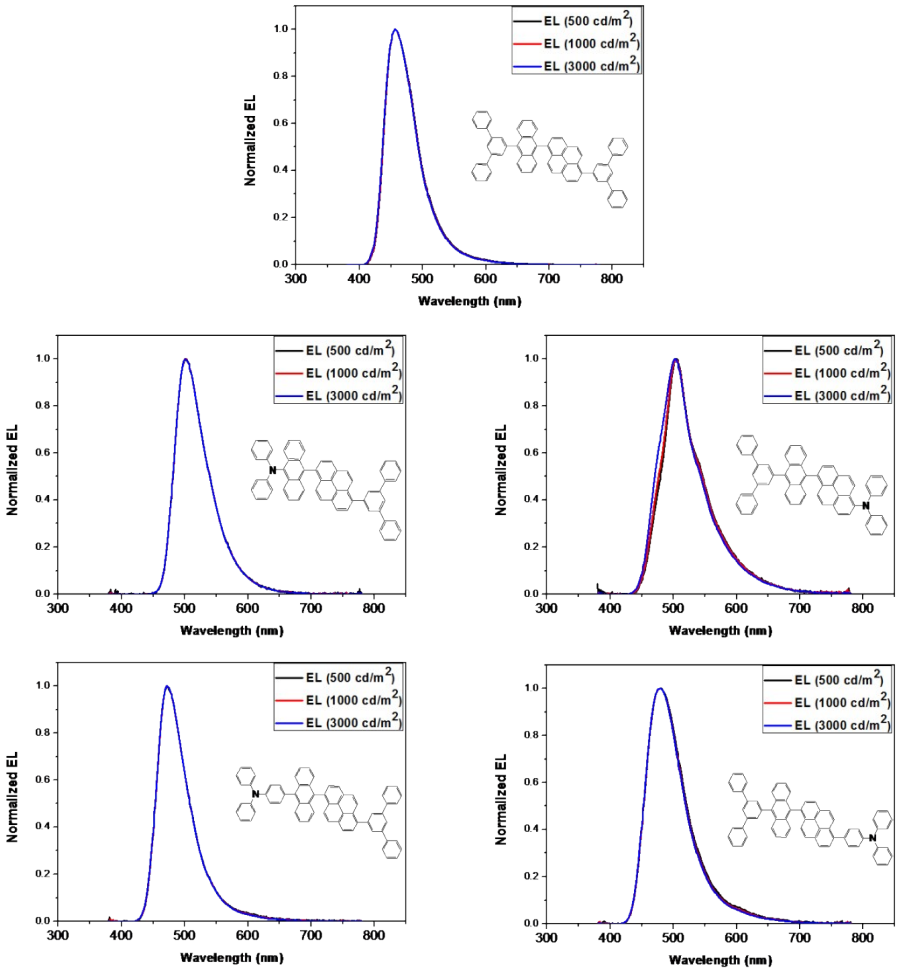

Fig. S4. Normalized EL spectra of synthesized compounds

Table S1. Electroluminescence efficiency of the commercialized materials at 10 mA cm^{-2}: ITO/2-TNATA (60 nm)/NPB (15 nm)/emitting material (30 nm)/Alq3 (30 nm)/LiF (1 nm)/Al (200 nm) at 10 mA cm22.

Compound	Volt (v)	C.E. (cd/A)	P.E. (lm/W)	CIE (x, y)	EL (nm)
MADN [1]	6.71	2.86	1.48	(0.17, 0.14)	454
DPVBi[2]	7.65	3.92	1.61	(0.15, 0.16)	465

References

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2. S.-K. Kim, B. Y. -I. Park, I. -N. Kang, and J. Park, J. Mater. Chem., 2007, 17, 4670