## **Electronic Supplementary Information (ESI)**

## High-Tg Carbazole Derivatives as a New Class of Aggregation-Induced Emission Enhancement Materials<sup>†</sup>

Zhiyong Yang, Zhenguo Chi, \* Bingjia Xu, Haiyin Li, Xiqi Zhang, Xiaofang Li, Siwei Liu, Yi Zhang and Jiarui Xu\*

PCFM Lab and DSAPM Lab, FCM Institute, State Key Laboratory of Optoelectronic Materials and Technologies, School of Chemistry and Chemical Engineering, Sun Yat-sen University, Guangzhou 510275, China

chizhg@mail.sysu.edu.cn (Zhenguo Chi), xjr@mail.sysu.edu.cn (Jiarui Xu)



**Fig.S1** DSC curves upon second heating of the samples after a 10 °C/min cooling rate from the melts.



Fig. S2 TGA curves of the compounds.

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Fig. S3 UV-vis absorption spectra of the compounds in  $CH_2Cl_2$  solution (10<sup>-5</sup>M).



Fig. S4 PL spectrum of the compounds: (a) in  $CH_2Cl_2$  solution (10<sup>-5</sup>M); and (b) in solid state.



Fig. S5 CV curves of the compounds in  $CH_2Cl_2$  solution  $(10^5M)$  : (a) pbc2 (b) p2bc2 (c) p3bc2 (d) p4bc2 (e) pbt2 (f) p2bt2.



**Fig. S6** PL spectra of the synthesized compounds in water/THF mixtures with different volume fractions of water. The inset in PL spectra depict the changes in PL peak intensity.



Fig. S7 UV-vis absorption spectra of the synthesized compounds in water/THF mixtures with

different volume fractions of water.



**Fig. S8** Changes of UV absorption wavelength of the compound in 60:40 (v/v) water/THF in relation to that in the THF solution.