# Supporting Information

# Arylfluorene based universal hosts for solution-processed RGB and white phosphorescent organic light-emitting devices

Xinwen Zhang,‡[a] Tao Yang,‡[a] Qi Wei,‡[a] Yuehua Chen,[a] Xin Guo,[a] Linghai Xie,[a] Wenyong Lai,[a] Quli Fan,[a] Yan Qian,*[a] Wei Huang,*[ab]

[a] *Key Laboratory for Organic Electronics and Information Displays & Institute of Advanced Materials, Jiangsu National Synergetic Innovation Center for Advanced Materials, Nanjing University of Posts & Telecommunications, Nanjing 210023, China*
*E-mail: iamyqian@njupt.edu.cn*
[b] *Key Laboratory of Flexible Electronics & Institute of Advanced Materials, Jiangsu National Synergetic Innovation Center for Advanced Materials, Nanjing Tech University, Nanjing 211816, China*
*E-mail: iamwhuang@njtech.edu.cn*
‡ These authors contributed equally to this work.

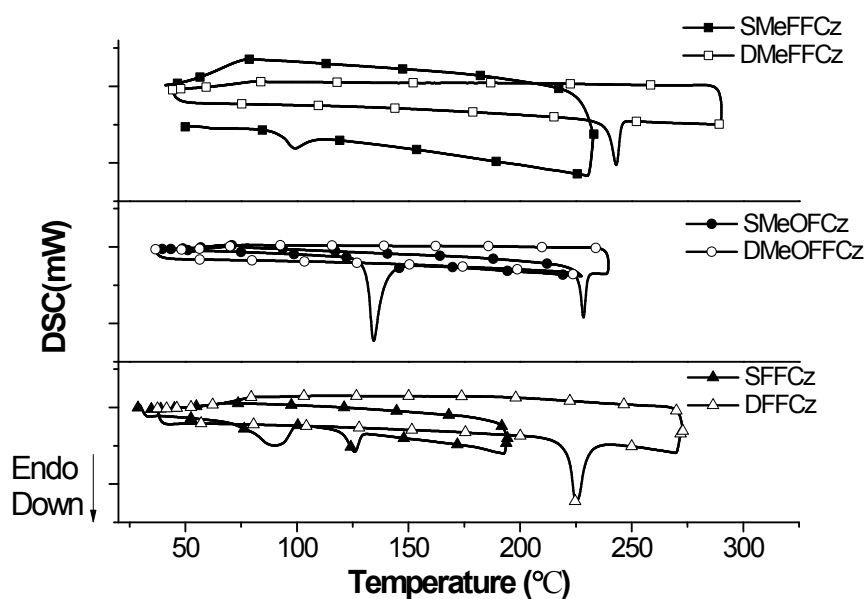## 1. Thermal stabilities of AFs/cabazole hybrid compounds



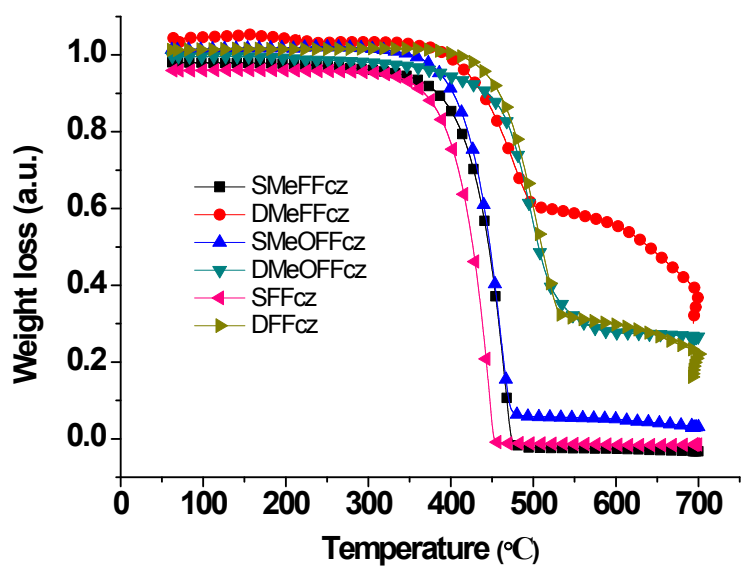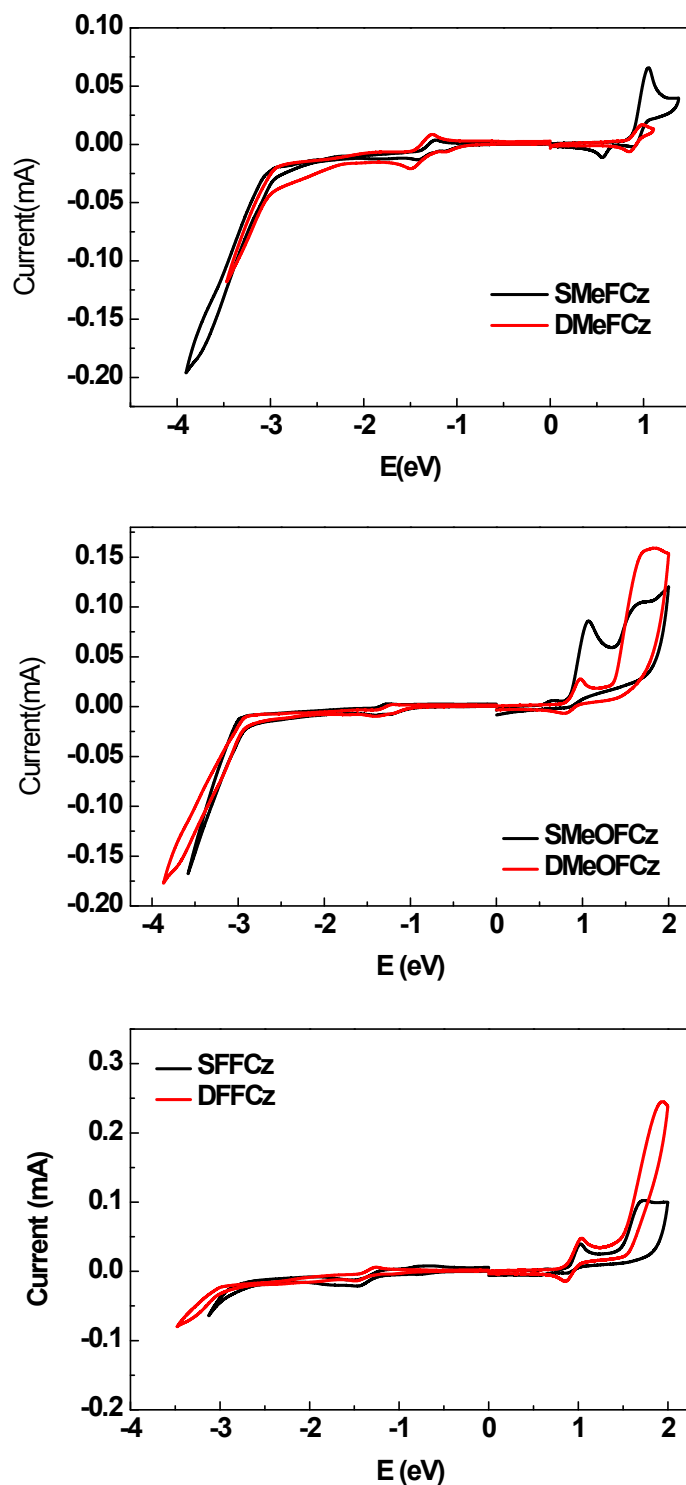**Fig. S1.** The DSC curves of AFs/cabazole hybrid compounds

**Fig. S2.** The TG curves of AFs/cabazole hybrid compounds.

## 2. Cyclic voltammetry curves of AFs/cabazole hybrid compounds



**Fig. S3.** Oxidative and reductive cyclic voltammetry plots of AFs/cabazole hybrid compounds, measured in $CH_2Cl_2$ and THF solutions, respectively, with $Bu_4NPF_6$ as the electrolyte and ferrocene/ferrocenium (Fe/Fe$^+$) couple as internal reference.

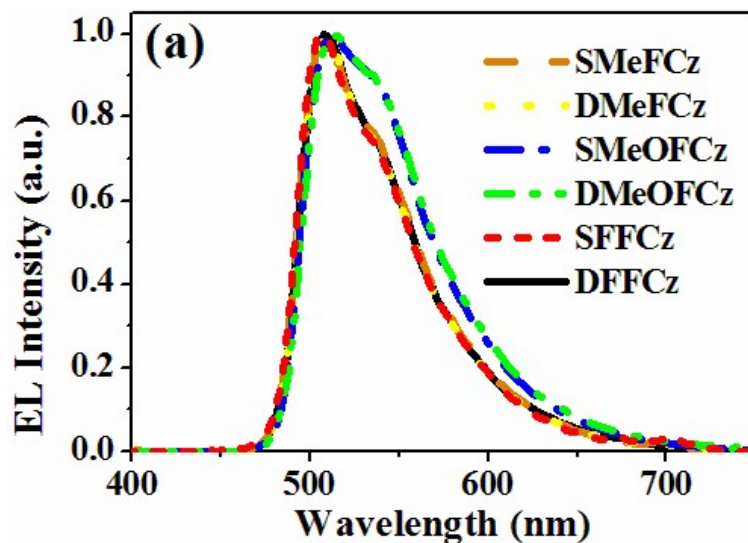# 3. Electroluminescent Properties of phosphorescent OLEDs



**Fig. S4.** Normalized EL spectra of green OLEDs based on AFs/cabazole host materials.
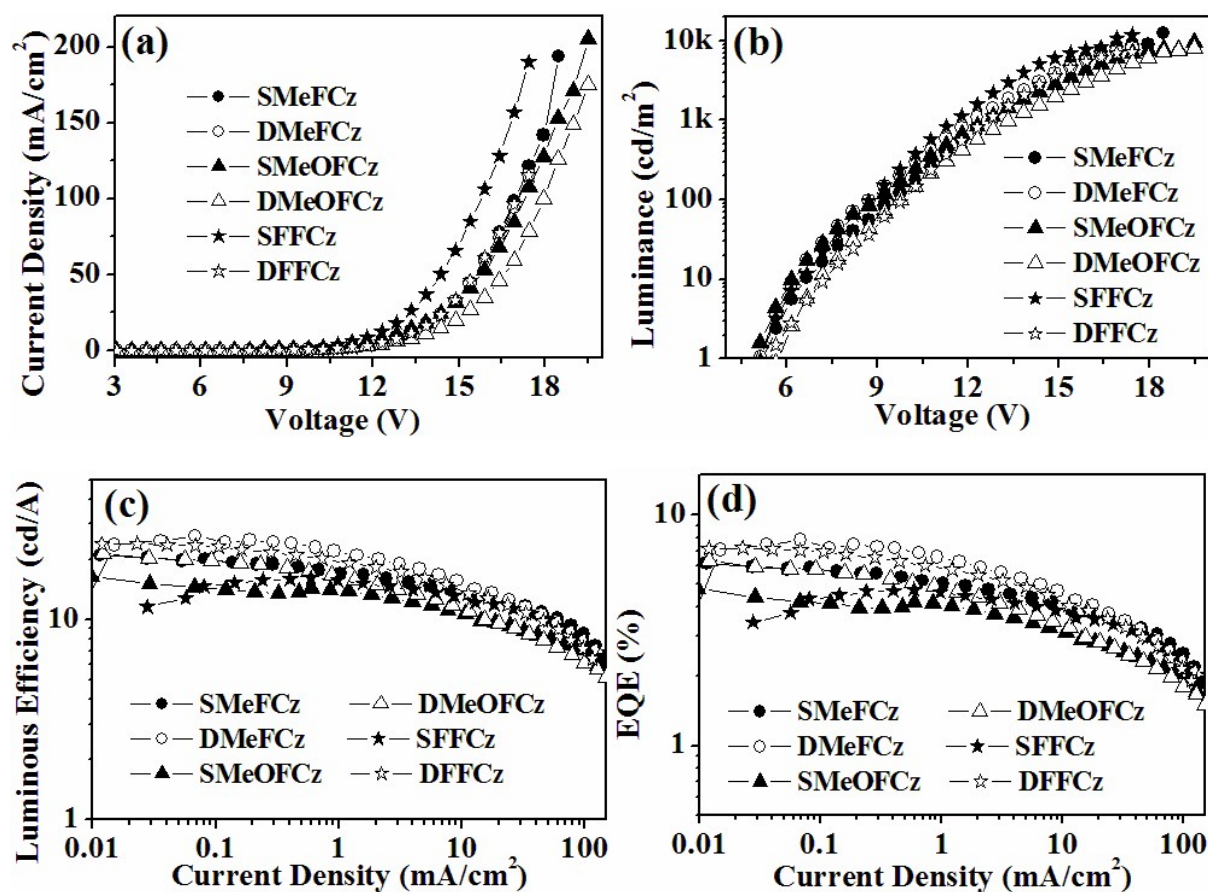


**Fig. S5.** Device characteristics of the solution-processed green phosphorescent OLEDs based on AFs/cabazole host materials: (a) current density-voltage, (b) luminance-voltage, (c) luminous efficiency- current density and (d) EQE- current density.
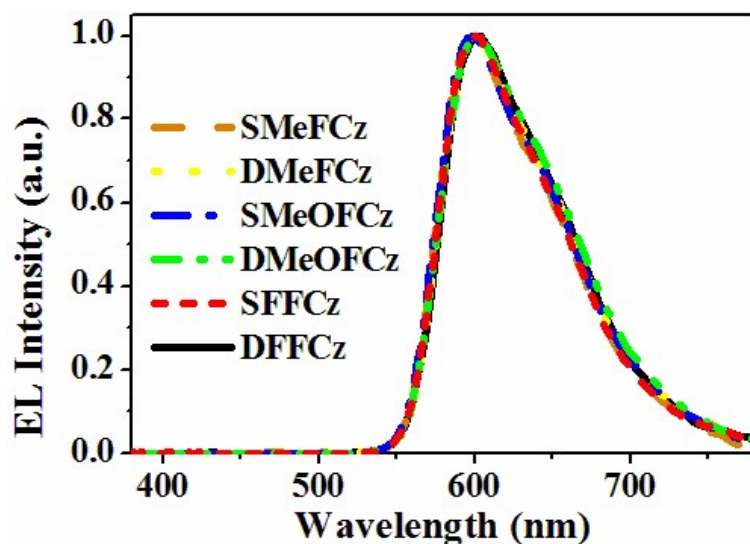
**Fig. S6.** Normalized EL spectra of red OLEDs based on AFs/cabazole host materials.
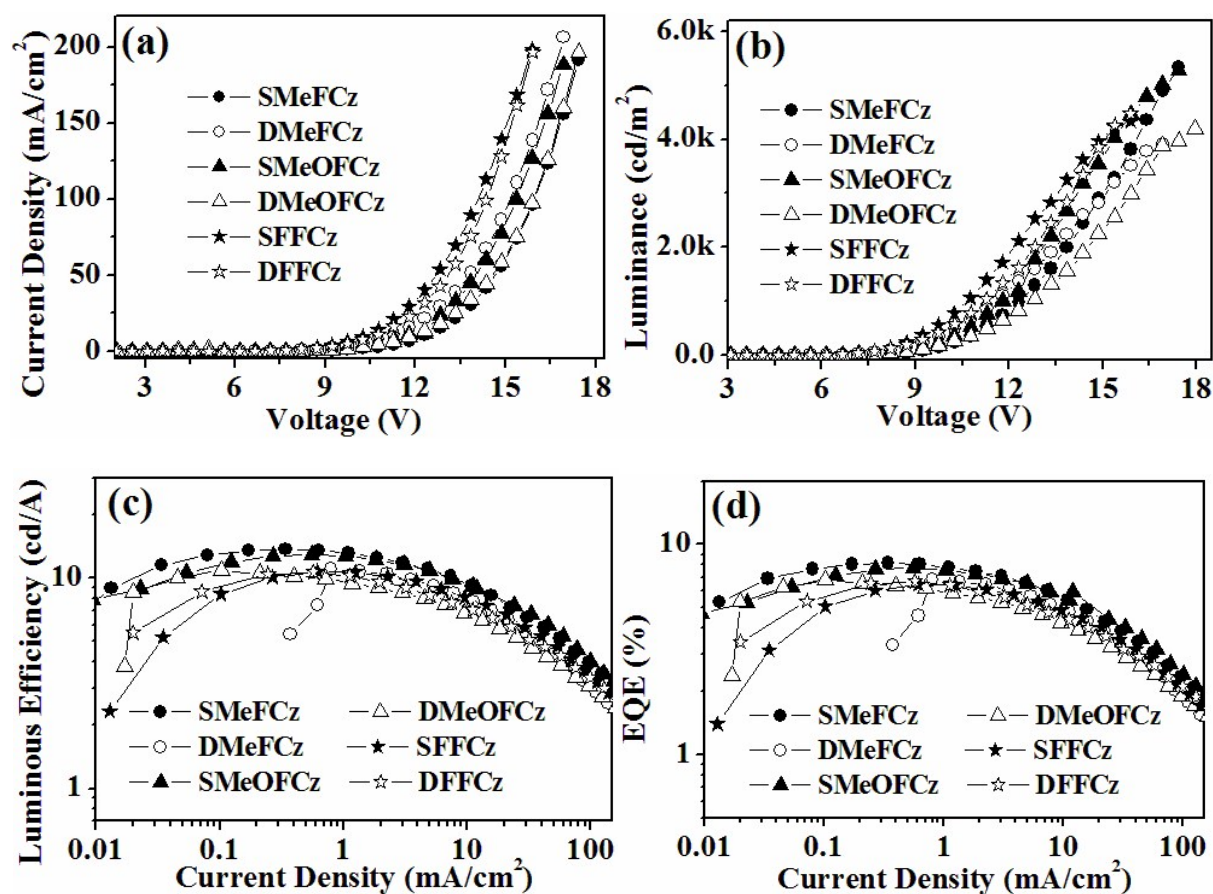


**Fig. S7** Device characteristics of the solution-processed red phosphorescent OLEDs based on AFs/cabazole host materials: (a) current density-voltage, (b) luminance-voltage, (c) luminous efficiency- current density and (d) EQE- current density.
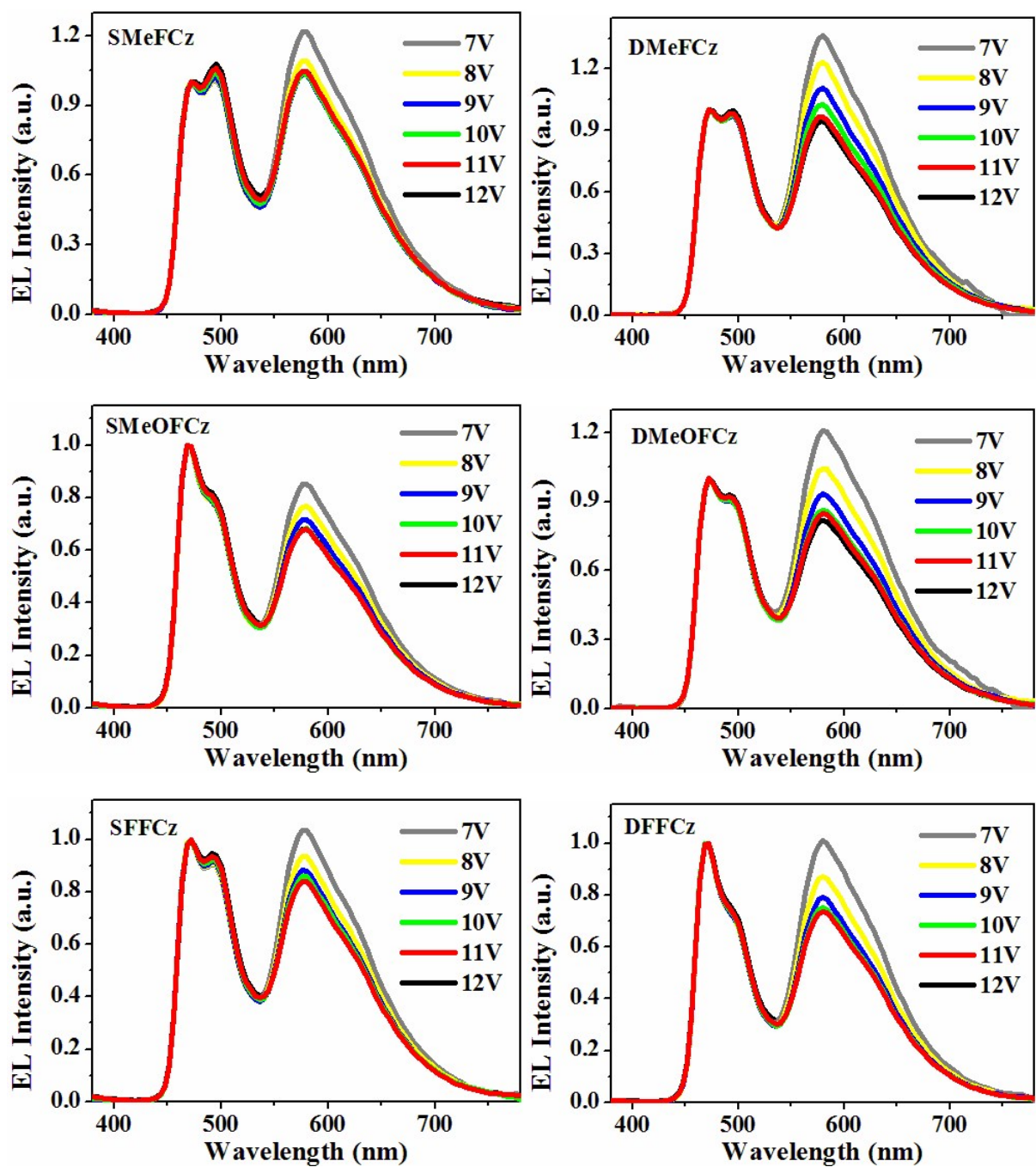
**Fig. S8** Normalized EL spectra of white OLEDs based on AFs/cabazole host materials.