Supporting Information

New efficient fused-ring spiro[benzoanthracene-fluorene] dopant materials for blue fluorescent organic light-emitting diodes

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Following is the description of analytical instruments we used for structure characterization. It may be inserted somewhere in the main manuscript or supplementary. The \textsuperscript{1}H and \textsuperscript{13}C nuclear magnetic resonance (NMR) spectra were taken on a Bruker, Avance 600 nuclear magnetic resonance spectroscope (NMR, 600 MHz). Energy levels were measured with a low-energy photo-electron spectrometer (AC-2; Riken-Keiki, Union City, CA, USA). High resolution mass spectra were recorded using an HP 6890 (Brea, CA, USA) and Agilent Technologies 5975C MSD in FAB mode (Palo Alto, CA, USA).
Figure S1. $^1$H NMR spectrum of CSBAF.
Figure S1-1. Enlarged $^1$H NMR spectrum of CSBAF in the 6.0-8.5 ppm range.
Figure S2. Mass spectrum of CSBAF.
Figure S3. $^1$H NMR spectrum of CBSBAF.
Figure S3-1. Enlarged $^1$H NMR spectrum of CBSBAF in the 6.0-8.5 ppm range.
Figure S4. Mass spectrum of CBSBAF.
Figure S5. $^1$H NMR spectrum of DTSBAF.
Figure S5-1. Enlarged $^1$H NMR spectrum of DTSBAF in the 6.0-8.5 ppm range.
Figure S6. $^{13}$C NMR spectrum of DTSBAF.
Figure S7. Mass spectrum of DTSBAF.
Figure S8. $^1$H NMR spectrum of DBSBAF.
Figure S8-1. Enlarged $^1$H NMR spectrum of DBSBAF in the 6.0-8.5 ppm range.
Figure S9. $^{13}$C NMR spectrum of DBSBAF.
Figure S9-1. Enlarged $^{13}$C NMR spectrum of DBSBAF.
Figure S10. Mass spectrum of DBSBAF.
Figure S11. Photoelectron spectrum of DTSBAF by AC2.