

## **Device characteristics of organic light-emitting diodes comprising terfluorene modified with triphenyltriazine**

The characteristics of a series of organic blue light-emitting diodes comprising terfluorene were investigated. The composition of the emitter layer was either a neat terfluorene compound, F(MB)3, F(MB)3 doped with TRZ, triphenyltriazine, as an electron acceptor, or hybrid compounds, TRZ-3F(MB)3 and TRZ-1F(MB)3, viz. TRZ functionalized with F(MB)3. The emitter layer was deposited by spin-casting from a solution on top of a PEDOT:PSS hole-injecting layer. These acceptor-containing emitters were responsible for decreasing electroluminescence efficiency with an increasing TRZ content. The loss of efficiency can be attributed to an enhanced electron transport through the emitter layer and a consequent shift of the electron-hole recombination zone toward the exciton-quenching PEDOT:PSS interface. Compared to TRZ as the electron-accepting dopant in F(MB)3, TPBI caused a more substantial decrease in emission efficiency and a more pronounced rise in drive voltage presumably because of the protonation of TPBI by PEDOT:PSS to a much greater extent.