

Study on Hole Injection Properties of Phenothiazine Derivatives for OLED

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We propose new HIL materials by using phenothiazine moiety which is new functional group for organic materials. Pz-tPz-Pz and Pz-2tPz-Pz using phenothiazine moiety were synthesized as the new conjugated compound. Device configuration is ITO/ Pz-tPz-Phz or Pz-2tPz-Pz (60nm)/NPB (15nm)/Alq3 (70nm)/LiF (1nm)/Al (200nm). OLED devices showed typical I-V characteristics and normal green EL light. OLEDs device using Pz-2tPz-Pz as HIL layer showed high current efficiency of 4.13cd/A.