

Fluorene polymer device hole Mobility TOF

1. Mobility

$$\mu_p = 4 \cdot 10^{-4} \text{ (} 5 \cdot 10^5 \text{ V/cm)}$$

$$\mu_p = 3 \cdot 10^{-4} \text{ (} 4 \cdot 10^4 \text{ V/cm)}$$

$$\mu_p = 4.2 \cdot 10^{-4} \text{ (} 8 \cdot 10^5 \text{ V/cm)}$$

Mobility weak electric field dependence chemical regularity purity high degree

- Charge carrier mobility

- (i) Relation to the charge balance factor for injection and transport of electrons and holes to the recombination zone.
- (ii) Concerns the attainment of the high brightness required for passive matrix addressed displays.

2. Time of Flight

The large absorption coefficient, $\alpha = 10^5/\text{cm}$, typical for these materials (conjugated polymer), means that the excitation pulse is absorbed within a distance of order 100nm of the illuminated electrode, and thus, that the photogenerated carrier packet has similar extension.

Typical field $E = 1.6 \cdot 10^5 \text{ V/cm}$

Typical temp. = 300K