Electronic Supplementary Material (ESI) for Soft Matter
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Supporting Information

Synthesis and Morphology of New Asymmetric Star Polymers of Poly[4-(9,9-dihexylfloren-2-yl)styrene]-*block*-Poly(2-vinylpyridine) and Their Non-Volatile Memory Device Applications

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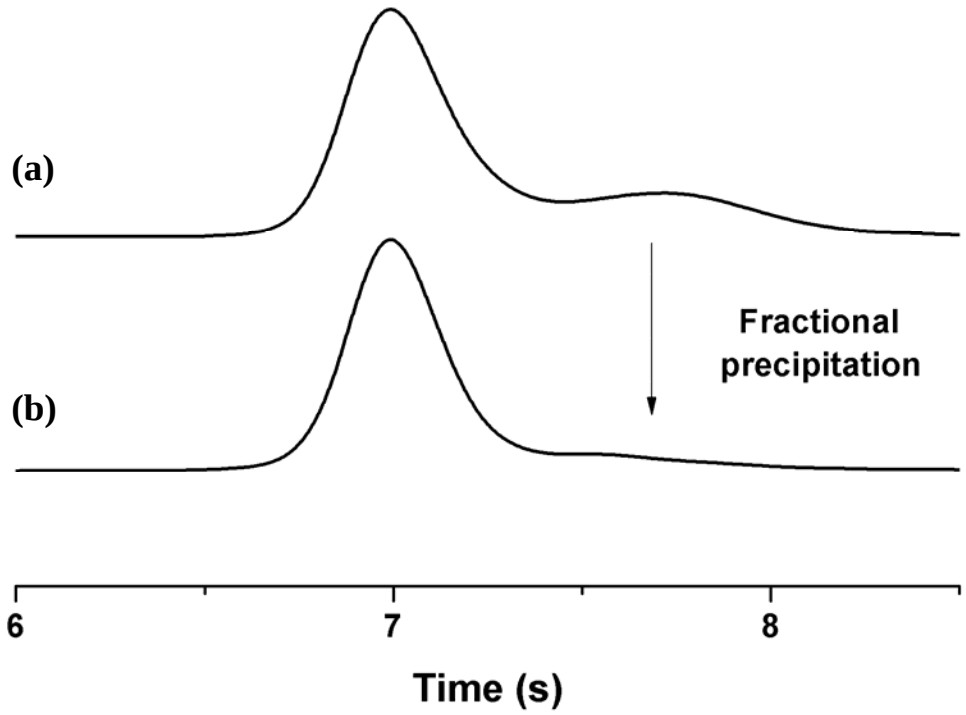

Fig. S1. GPC trace of **AB_2** asymmetric star-shaped polymers (A=P(St-Fl), B=P2VP): a) before, and b) after purification.

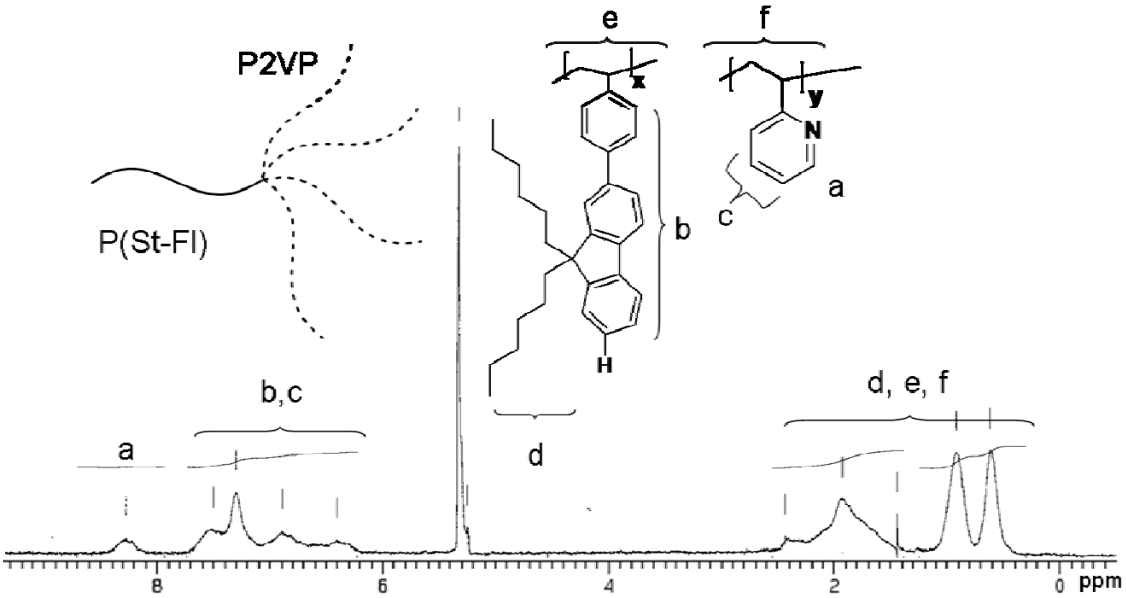

Fig. S2. ^{1}H NMR spectra of **AB$_4$** asymmetric star-shaped polymers (A = P(St-Fl), B = P2VP) in CD_2Cl_2.

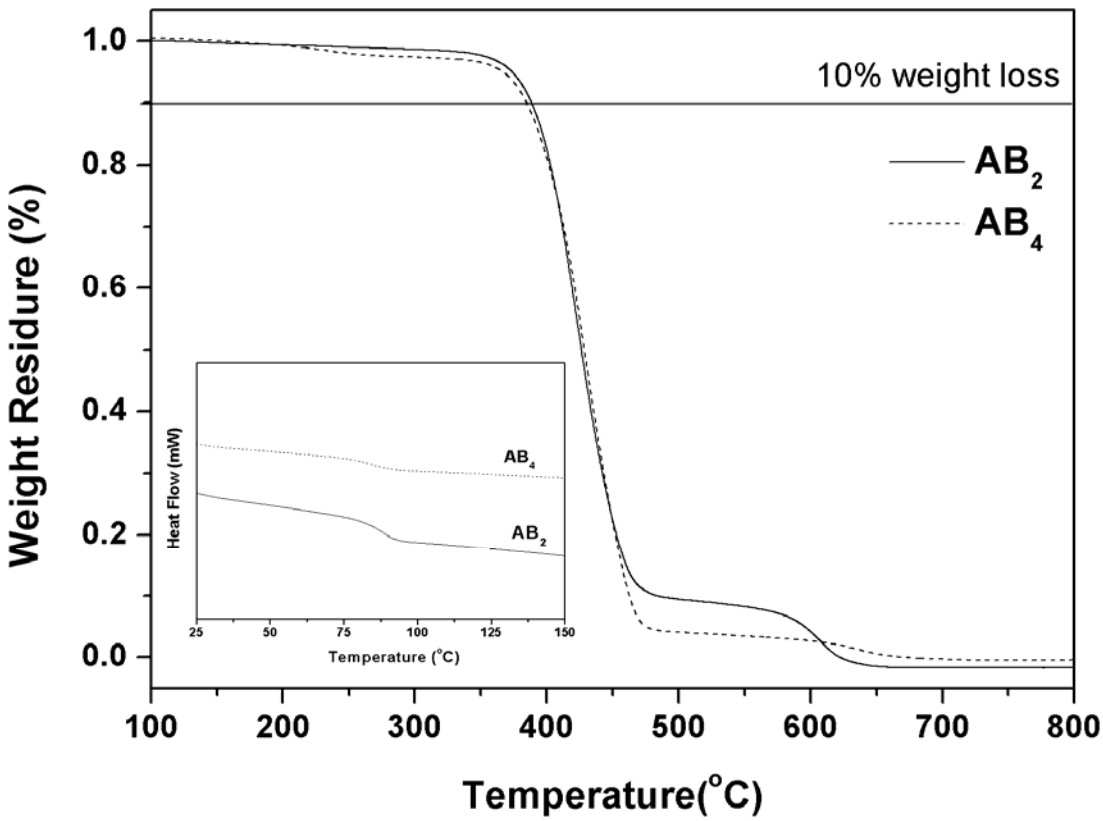

Fig. S3. Thermal analysis of the studying polymers, **AB$_2$** and **AB$_4$** under nitrogen atmosphere.

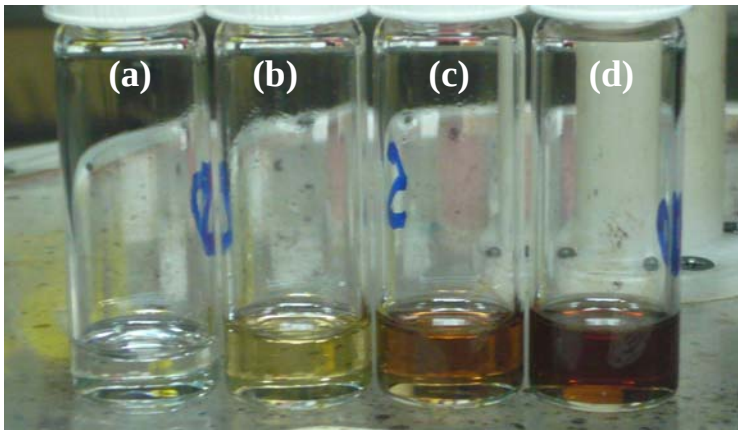

Fig. S4. Photographs of a) **AB$_2$** in chloroform; b) 1 % PCBM: **AB$_2$** composite in chloroform; and (c) 5 % PCBM: **AB$_2$** composite in chloroform; (c) 10 % PCBM: **AB$_2$** composite in chloroform.

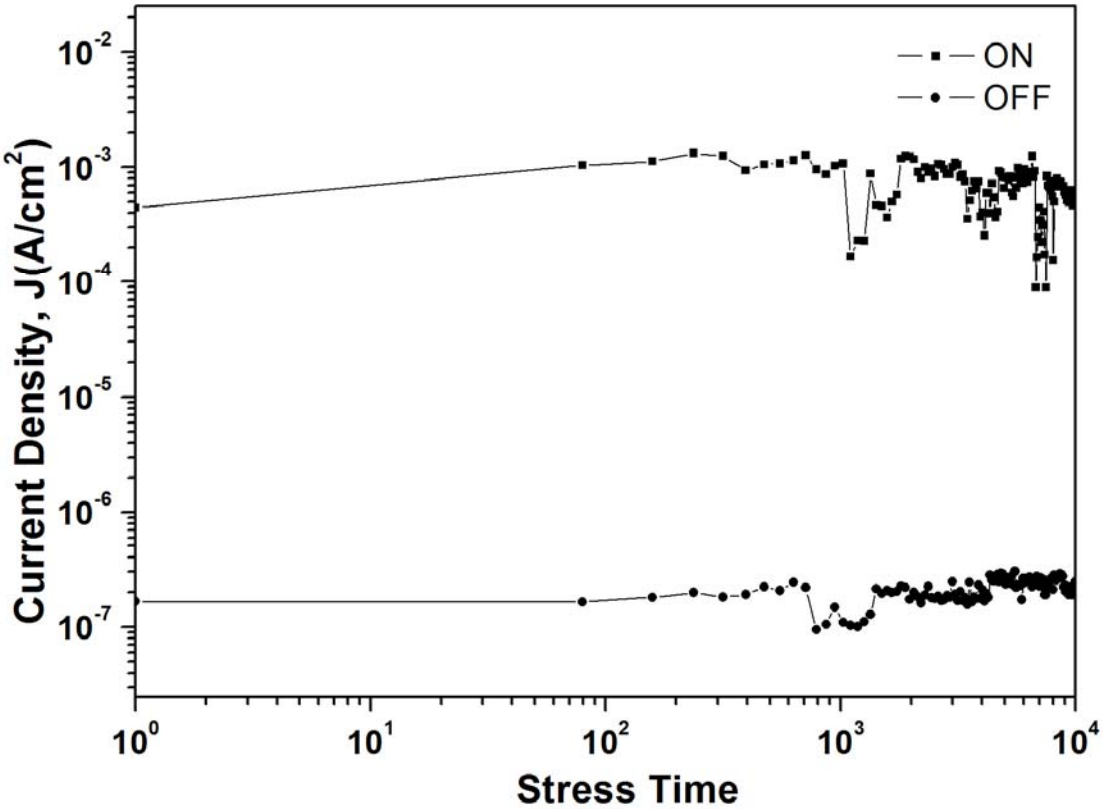

Fig. S5. Retention times of the ITO/5%PCBM:**AB$_2$**/Al device.

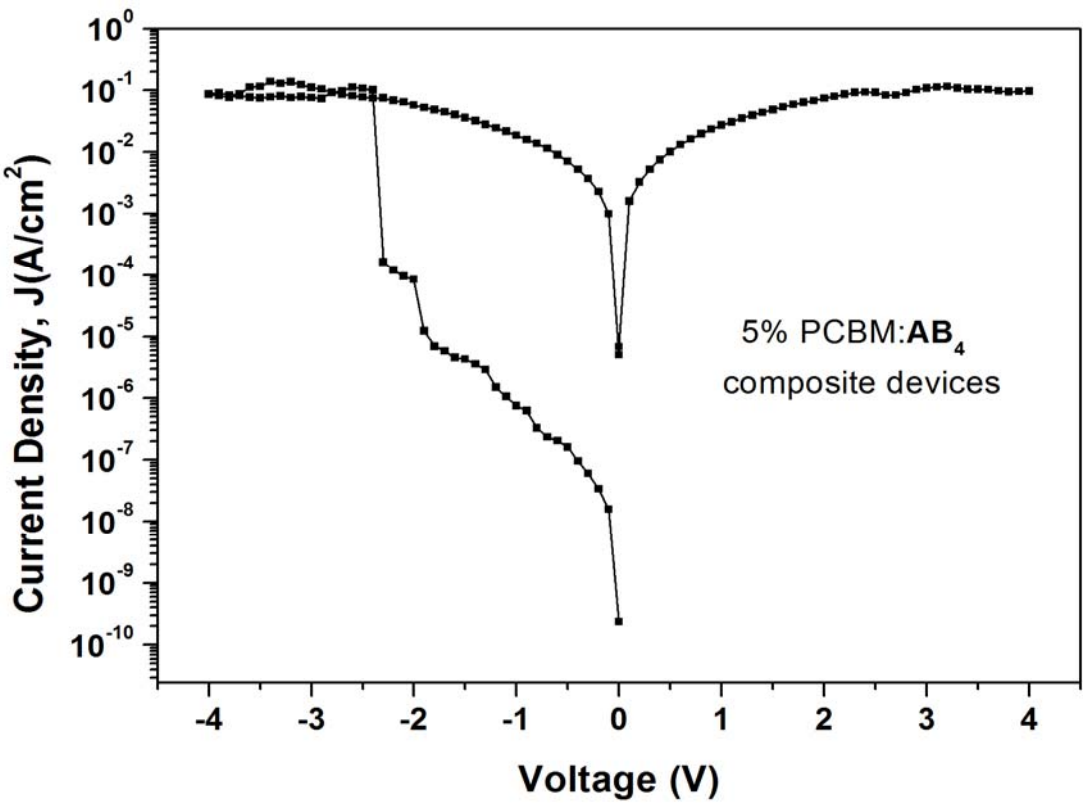

Figure S6. Current density vs. voltage plots for ITO/5%PCBM:**AB$_4$**/Al composites devices.

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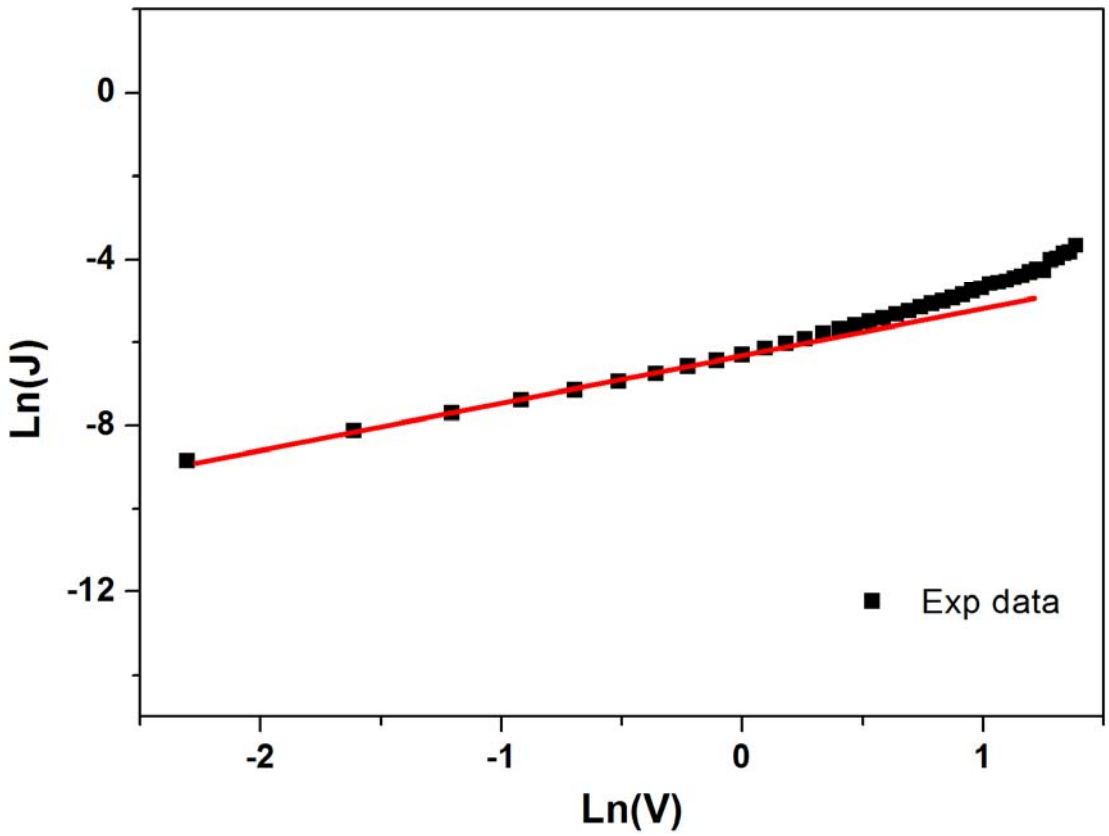

Fig. S7. Analysis of *J-V* characteristics of the ITO/10%PCBM:**AB$_2$**/Al devic